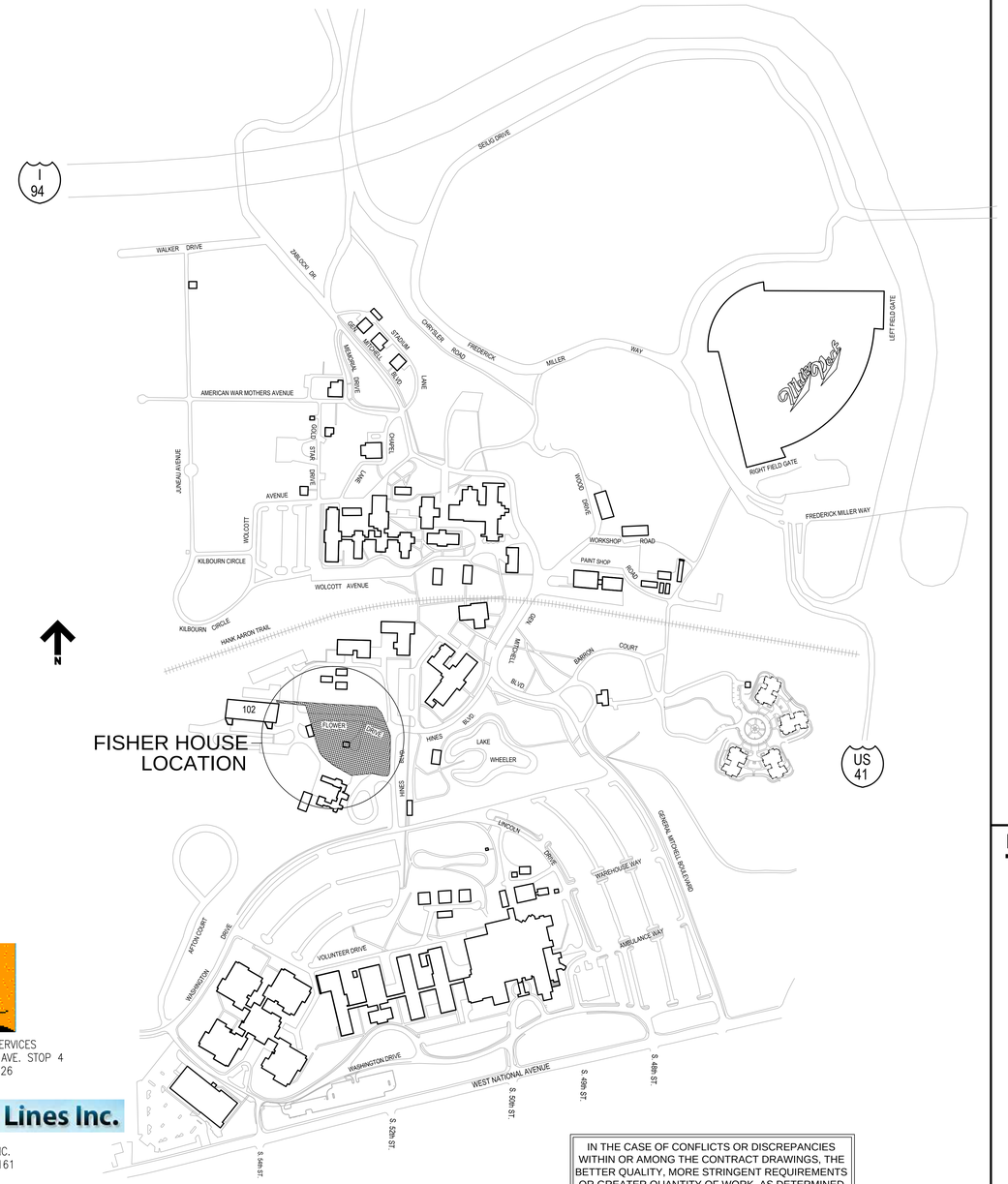
'CLEMENT J. ZABLOCKI VA MEDICAL CENTER'

5000 W. NATIONAL AVE.
MILWAUKEE, WI

SITE PROVIDE FISHER HOUSE INFRASTRUCTURE
PROJECT NO.: 695-13-118

CAMPUS MAP



FISHER HOUSE LOCATION

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302-9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246-0220

IN THE CASE OF CONFLICTS OR DISCREPANCIES WITHIN OR AMONG THE CONTRACT DRAWINGS, THE BETTER QUALITY, MORE STRINGENT REQUIREMENTS OR GREATER QUANTITY OF WORK, AS DETERMINED BY THE GOVERNMENT, SHALL BE PROVIDED.

PROJECT TEAM

CIVIL

CHEQUAMEGON BAY ENGINEERING, INC.

ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025

MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

SITE ELECTRIC / IT/ MECHANICAL

THE MATRIX GROUP

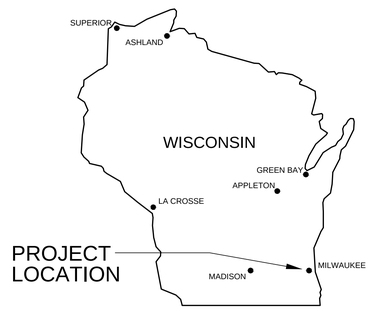
MILWAUKEE, WI
311 E. CHICAGO ST. SUITE 310
MILWAUKEE, WI 53202
PHONE: (414)-329-2827
FAX: (414)-329-2920

LANDSCAPE ARCHITECT

DAMON FARBER ASSOCIATES

MINNEAPOLIS, MN
923 NICOLLET MALL
MINNEAPOLIS, MN 55402
PHONE: (612)-332-7522
FAX: (612)-332-0936

LOCATION MAP



SHEET INDEX

DRAWING SHEET INDEX

SHEET NO.	SHEET TITLE
G100	TITLE SHEET, INDEX & PROJECT INFORMATION
C000	CIVIL PLAN INFORMATION
C100	OVERALL EXISTING CONDITIONS
C101	SITE DEMOLITION PLAN
C102	PROPOSED SITE LAYOUT
C102.1	DETAILED SITE LAYOUT
C103	PROPOSED GRADING PLAN
C103.1	EROSION CONTROL PLAN
C104	PROPOSED SITE UTILITY LAYOUT
C104.1	UTILITY PROFILE SHEET
C105	ROAD PROFILE AND DETAILS
C106	STEAM TUNNEL EAST PLAN AND PROFILE
C106.1	STEAM TUNNEL WEST PLAN AND PROFILE
C106.2	STEAM TUNNEL DETAILS
C107	DETAILS
C107.1	DETAILS
L100	SITE LANDSCAPE PLAN
MS100	OVERALL MECHANICAL SITE PLAN
MS101	ENLARGED MECHANICAL PLANS
MS102	DETAILS
E000	ELECTRICAL SYMBOLS LIST AND ABBREVIATIONS
E100	SITE PLAN - EXISTING CONDITIONS
E200	SITE PLAN - POWER AND LIGHTING
E300	SITE PLAN - LOW VOLTAGE SYSTEMS
E400	ELECTRICAL ONE LINE DIAGRAM AND DETAILS

STATEMENT OF BID ITEM(S):

BASE BID: WORK INCLUDES GENERAL CONSTRUCTION, ALTERATIONS, ROADS, WALKS, GRADING, DRAINAGE; MECHANICAL, ELECTRICAL, TELEPHONE AND DATA SITE WORK AND INSTALLATION, UTILITY SYSTEMS (WATER UTILITY, STORM SEWER, SANITARY SEWER, AND GAS INSTALLATION), INSTALLATION OF NEW STEAM TUNNEL AND STEAM LINE, INSTALLATION OF BUILDING SECURITY SYSTEMS, FIRE ALARM, POLICE CALL AND NECESSARY REMOVAL OF EXISTING STRUCTURES AND CONSTRUCTION AND CERTAIN OTHER ITEMS AS ILLUSTRATED ON THE PLANS.

PHASE I OF CONSTRUCTION CONSISTS OF: ALL GRADING, ROAD IMPROVEMENTS, CURB & GUTTER, UTILITY EXTENSIONS AND RELOCATIONS, STEAM TUNNEL AND STEAM PIPING SYSTEM INSTALLATION, LANDSCAPING, SIDEWALK INSTALLATION, SITE LIGHTING AND ANY OTHER IMPROVEMENTS AS ILLUSTRATED ON THE PLANS

DURATION: 120 DAYS FROM NOTICE TO PROCEED

PHASE II OF CONSTRUCTION CONSISTS OF: ALL FISHER HOUSE BUILDING SYSTEM INSTALLATION AS REQUIRED BY THE PLANS (SECURITY SYSTEMS, CARD READERS, FIRE ALARM, ETC). PHASE II CONSISTS OF INSTALLATION OF BUILDING IMPROVEMENTS AFTER SIGNIFICANT CONSTRUCTION OF THE FISHER HOUSE IS COMPLETE (UNDER SEPARATE CONTRACT). PHASE II IS TO BE COORDINATED/COMPLETED AFTER THE FISHER HOUSE IS AT LEAST 80% COMPLETE.

DURATION: 90 DAYS FROM START OF WORK WITHIN FISHER HOUSE. COORDINATE WITH VA COR AND FISHER HOUSE REPRESENTATIVE.

PRICE FOR BASE BID: $_____

ALTERNATE NO. 1: –

ALL WORK IN BASE BID, MINUS INSTALLATION OF NEW ROAD BASE AND NEW 2.5" BINDER COURSE. ALTERNATE TO INCLUDE COSTS FOR RECYCLING EXISTING ROAD SURFACE AND EXISTING SUBGRADE FOR RE–USE AS NEW ROAD SUBGRADE AND USING EXISTING RECYCLED MATERIAL FOR 2.5" ASPHALT BINDER COURSE. ASSUME EXISTING ROAD SUB–BASE THICKNESS IS 6" AND PAVEMENT THICKNESS IS 4" FOR BIDDING PURPOSES. DURATION: 120 DAYS FROM NOTICE TO PROCEED.

PRICE FOR ALTERNATE BID ITEM 1: $_____

ALTERNATE NO. 2: –

ALL WORK IN BASE BID, MINUS INSTALLATION OF NEW CONCRETE TUNNEL SYSTEM, HIGH PRESSURE STEAM LINE, CONDENSATE, AND ALL OTHER WORK ASSOCIATED WITH THE STEAM CONNECTION FROM EXISTING TUNNEL TO BUILDING 102. DURATION: 120 DAYS FROM NOTICE TO PROCEED.

PRICE FOR ALTERNATE BID ITEM 1: $_____

FINAL CONSTRUCTION DOCUMENTS

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates — Landscape Architects
Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC. ©CBE 2002-2012

ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025

MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

Drawing Title: Titlesheet, Project Information & Sheet Index	Project Title: Provide Fisher House Infrastructure	Project Number: 695-13-118	Office of Facilities Management
Approved: Project Director	Location: VA Medical Center,Milwaukee, WI	Building Number: -	
	Date: 19 April 2013 / Checked By: DJC / Drawn By: NLB	Drawing Number: G100	Department of Veterans Affairs

VA FORM 08–6231, OCT 1978

GENERAL CIVIL LEGEND

SEE INDIVIDUAL SHEETS FOR VARIATION

LEGEND:

EXISTING HIGH QUALITY TREE

EXISTING LOW QUALITY TREE

EXISTING GAS LINE

EXISTING WATER LINE

EXISTING STORM SEWER LINE

EXISTING SANITARY SEWER LINE

EXISTING UNDERGROUND ELECTRIC

EXISTING COMMUNICATIONS LINE

EXISTING STEAM LINE

EXISTING COMMUNICATIONS PEDESTAL

EXISTING CATCH BASIN

EXISTING SANITARY MANHOLE

EXISTING WATER VALVE

EXISTING HYDRANT

BENCHMARK LOCATION

EXISTING LIGHT POLE

EXISTING ELECTRICAL MANHOLE

XF EXISTING TRANSFORMER

EXISTING BOLLARD

EXISTING SIGN

FENCE LINE

PROPOSED 2" GAS LINE

PROPOSED WATER LINE (2"&4")

PROPOSED 6" STORM SEWER

PROPOSED 6" SANITARY

PROPOSED 2" IRRIGATION SERVICE

WV PROPOSED WATER VALVE

GV PROPOSED GAS VALVE

PROPOSED ROOF DRAIN COLLECTION POINT

EXISTING STORM SEWER STRUCTURE SCHEDULE

EXISTING STORM INLETS

CB1 (ROUND)
RIM: 630.47
INV. NW: 625.40 (8")
INV. SE: 625.30 (12")

CB2 (SQUARE)
RIM: 631.44
INV. NW: 628.10 (8")
INV. SE: 628.10 (8")

CB3 (ROUND)
RIM: 633.41
INV. S: 630.30 (8")

CB4 (SQUARE)
RIM: 637.26
T.O. VERTICAL PIPE: 635.8

CB5 (SQUARE)
RIM: 641.23
T.O. VERTICAL PIPE: 639.7

CB6 (ROUND)
RIM: 625.06
INV. N: 642.7 (12")
INV. S: 642.7 (12")

CB7 (SQUARE)
RIM: 652.26
INV. N: 643.7 (12")
INV. W: 643.7 (12")

CB8 (SQUARE)
RIM: 634.11
INV. E: 629.4 (12")

CB9 (SQUARE)
RIM: 634.42
INV. E: 629.7 (12")

CB10 (ROUND)
RIM: 636.81
INV. N: 631.7 (12")
INV. S: 631.7 (12")
INV. W: 632.5 (8")

CB11 (SQUARE)
RIM: 638.50
INV. E: 634.6 (8")

EXISTING SANITARY SEWER STRUCTURE SCHEDULE

EXISTING CONCRETE SANITARY MANHOLES

MS1
RIM: 630.94
INV. NW: 620.34 (8")
INV. SE: 626.50 (8")

STORM MANHOLES, INLETS AND SANITARY MANHOLE SCHEDULE COMPILED FROM SIGMA GROUP SURVEY INFORMATION

TOPOGRAPHIC SURVEY COMPLETED BY THE SIGMA GROUP IN JANUARY, 2013.

PROPOSED STORM SEWER STRUCTURE SCHEDULE

CONCRETE STORM MANHOLES

MH10 (NOT IN CONTRACT)
RIM: (SET PER FISHER CONTRACT – FINISH GRADE ~643.5')
INV. N: 634.00 (8")
INV. NE: ROOF DRAIN
INV. S: 633.90 (8")

PROPOSED STORM SEWER STRUCTURE SCHEDULE

CONCRETE CATCH BASINS

CB20 (NOT IN CONTRACT)
RIM: 646.0
INV. S: 641.0 (8")

CB21
RIM: 643.3
INV. S: 641.8 (8")

PROPOSED SANITARY SEWER STRUCTURE SCHEDULE

CONCRETE SANITARY MANHOLES

MS01
RIM: 637.0' (MATCH GRADE)
INV. SW = 630.0'
INV. NE = TO BE INSTALLED BY FISHER HOUSE CONTRACTOR

UTILITY NOTES:

UTILITIES SHOWN ARE AS REPORTED TO THE DESIGN TEAM AND INDICATED ON THE EXISTING UTILITY BASE PLAN. NO ATTEMPTS HAVE BEEN MADE TO EXCAVATE, UNCOVER, OR EXPOSE UNDERGROUND UTILITIES TO VERIFY THEIR SIZE, DEPTH, CONDITION, OR EXACT LOCATION. FOR ADDITIONAL INFORMATION PLEASE CONTACT ONE OF THE CONTACTS LISTED BELOW

COR
CHRIS BRAUN
ZABLOCKI VA
PHONE: 414–384–2000 EXT. 46586
EMAIL: CHRISTIAN.BRAUN@VA.GOV

ELECTRIC
SCOTT LADWIG
ZABLOCKI VA
PHONE: 414–384–2000
EMAIL: SCOTT.LADWIG@VA.GOV

STEAM/MECHANICAL SYSTEMS
KEN SHARBET
ZABLOCKI VA
PHONE: 414–384–2000 EXT. 41060
EMAIL: KENNETH.SHARBET@VA.GOV
(CONFIRM)

WATER/SEWER
JEFF BAKER
ZABLOCKI VA
PHONE: 414–384–2000
EMAIL: JEFF.BAKER@VA.GOV

CABLE/IT/PHONE
WARREN WHITE
ZABLOCKI VA
PHONE: 414–382–5397
EMAIL: WARREN.WHITE@VA.GOV

ONE CALL SYSTEM
ALL LINE UTILITY SERVIES
414–302–9750
OR
PRIVATE LINES INC.
888–246–0220

WE ENERGIES
BOB BARCZAK
WE ENERGIES
PHONE: 414–944–5779
EMAIL:
ROBERT.BARCZAK@WE–ENERGIES.COM

GENERAL NOTES

1. EXISTING CONDITIONS AND TOPOGRAPHIC FEATURES, INCLUDING UTILITIES, HAVE BEEN LOCATED FROM FIELD LOCATES BY BLOOD HOUND INC. AND SURVEY BY THE SIGMA GROUP DATED JANUARY 2013 AND/OR UTILITY RECORDS.
2. THE AWARDED CONTRACTOR MUST COMPLY WITH THE CONDITIONS OF ALL PERMITS OBTAINED IN CONJUNCTION WITH THIS WORK. COPIES OF ALL PERMITS, IF ANY, ARE AVAILABLE IN THE PROJECT MANUAL OR ARE AVAILABLE FROM THE OWNER UPON REQUEST.
3. ALL STORM SEWER AND SANITARY SEWER CONSTRUCTION MUST BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD VA SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION.
4. ALL ROADWAY, GRADING AND OTHER SITE WORK MUST BE COMPLETED IN ACCORDANCE WITH THE STANDARD VA SPECIFICATIONS.
5. THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION" ISSUED BY THE U.S. DEPARTMENT OF LABOR.
6. PERIODIC TEMPORARY TRAFFIC CONTROL MAY BE REQUIRED IN ORDER TO COMPLETE SITE WORK. THE CONTRACTOR MUST NOTIFY THE CONTRACTING OFFICER'S REPRESENTATIVE (COR) 24 HRS. PRIOR TO IMPACTING ANY TRAFFIC LANES. TEMPORARY TRAFFIC CONTROL WILL BE INCIDENTAL TO THE CONSTRUCTION ACTIVITIES.
7. THE CONTRACTOR SHALL PROTECT ALL UTILITIES AND SITE IMPROVEMENTS TO REMAIN. ANY DAMAGE TO EXISTING UTILITIES OR SITE IMPROVEMENTS TO REMAIN SHALL BE REPAIRED BY THE CONTRACTOR. ANY NECESSARY REPAIRS MUST BE REPAIRED TO THE OWNER'S SPECIFICATIONS AND COORDINATED WITH THE ZABLOCKI VAMC COR. NECESSARY REPAIRS FOR DAMAGE WILL BE COMPLETED AT THE CONTRACTOR'S EXPENSE.
8. IN THE EVENT OF ANY DISCREPANCIES AND/OR ERRORS FOUND IN THE DRAWINGS, OR IF PROBLEMS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE COR AND ARCHITECT–ENGINEER IMMEDIATELY, PRIOR TO PROCEEDING WITH WORK. IF THE COR IS NOT NOTIFIED IMMEDIATELY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ANY REVISIONS TO THE PLANS AND SPECIFICATIONS, AS WELL AS REPAIRS DO TO CONTINUED CONSTRUCTION AFTER AN ERROR OR DISCREPANCY IS FOUND.
9. ALL CONTROL POINTS AND COORDINATES LISTED ARE BASED ON THE SURVEY PREPARED BY THE SIGMA GROUP. CONTRACTOR MUST VERIFY CONTROL POINTS IN THE FIELD AND WITH THE SIGMA GROUP. TO CONFIRM THEY ARE VALID PRIOR TO CONSTRUCTING THE SITE LAYOUT.
10. CONTRACTOR IS SOLELY RESPONSIBLE TO PROVIDE ADVANCED NOTICE TO THE DESIGNATED "ONE CALL SYSTEM" NOT LESS THAN THREE WORKING DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION REQUIRED TO PERFORM WORK CONTAINED ON THE ATTACHED PLAN SET.
11. EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF ANY WORK. DISCREPANCIES ARE TO BE REPORTED TO THE COR PRIOR TO STARTING WORK.
12. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION STAKING.

NOTES:

1. BENCHMARK #1 IS SOUTH FLANGE BOLT ON HYDRANT, EL.=649.29'.
2. BENCHMARK #2 IS SOUTH FLANGE BOLT ON HYDRANT, EL.=632.29
3. STEAM LINES SHOWN ARE PER CAD DRAWINGS PROVIDED BY THE VA AND BEST FIT BASED ON EXISTING STRUCTURES. FURTHER VERIFICATION USING EXPLORATIVE METHODS MAY BE NECESSARY TO DETERMINE THE EXACT LOCATION.
4. IN THE CASE OF CONFLICTS OR DISCREPANCIES WITHIN OR AMONG THE CONTRACT DRAWINGS, THE BETTER QUALITY, MORE STRINGENT REQUIREMENTS OR GREATER QUANTITY OF WORK, AS DETERMINED BY THE GOVERNMENT, SHALL BE PROVIDED.

PERMITTING NOTES:

SITE IS LESS THAN 1 ACRE OF DISTRUBED AREA
SITE IS LESS THAT ½ ACRE OF ADDED IMPERVIOUS AREA

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302–9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246–0220

DIGGERS HOTLINE
Toll Free (800) 242–8511
Milwaukee Area (414) 259-1181
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE. THERE MAY BE OTHER UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

FINAL CONSTRUCTION DOCUMENTS

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025
MILWAUKEE, WI
533 N. MAYFAIR RD.
SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

Drawing Title	CIVIL PLAN INFORMATION
Project Title	Provide Fisher House Infrastructure
Project Number	695-13-118
Building Number	-
Approved: Project Director	
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	DJC
Drawn By:	NLB
Drawing Number	C000

Office of Facilities Management
Department of Veterans Affairs

VA FORM 08–6231, OCT 1978

LEGEND:

- EXISTING HIGH QUALITY TREE
- EXISTING LOW QUALITY TREE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING STORM SEWER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING COMMUNICATIONS LINE
- EXISTING STEAM LINE
- EXISTING COMMUNICATIONS PEDESTAL
- EXISTING CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING WATER VALVE
- EXISTING HYDRANT
- BENCHMARK LOCATION
- EXISTING LIGHT POLE
- EXISTING ELECTRICAL MANHOLE
- EXISTING TRANSFORMER
- EXISTING BOLLARD
- EXISTING SIGN
- FENCE LINE

NOTES:

1. BENCHMARK #1 IS SOUTH FLANGE BOLT ON HYDRANT, EL.=649.29'.
2. BENCHMARK #2 IS SOUTH FLANGE BOLT ON HYDRANT, EL.=632.29
3. Steam lines shown are per CAD drawings provided by the VA and best fit based on existing structures. Further verification using explorative methods may be necessary to determine the exact location.

FINAL CONSTRUCTION DOCUMENTS

three inches = one foot
one and one half inches = one foot
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302-9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246-0220

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates
Landscape Architects

Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.

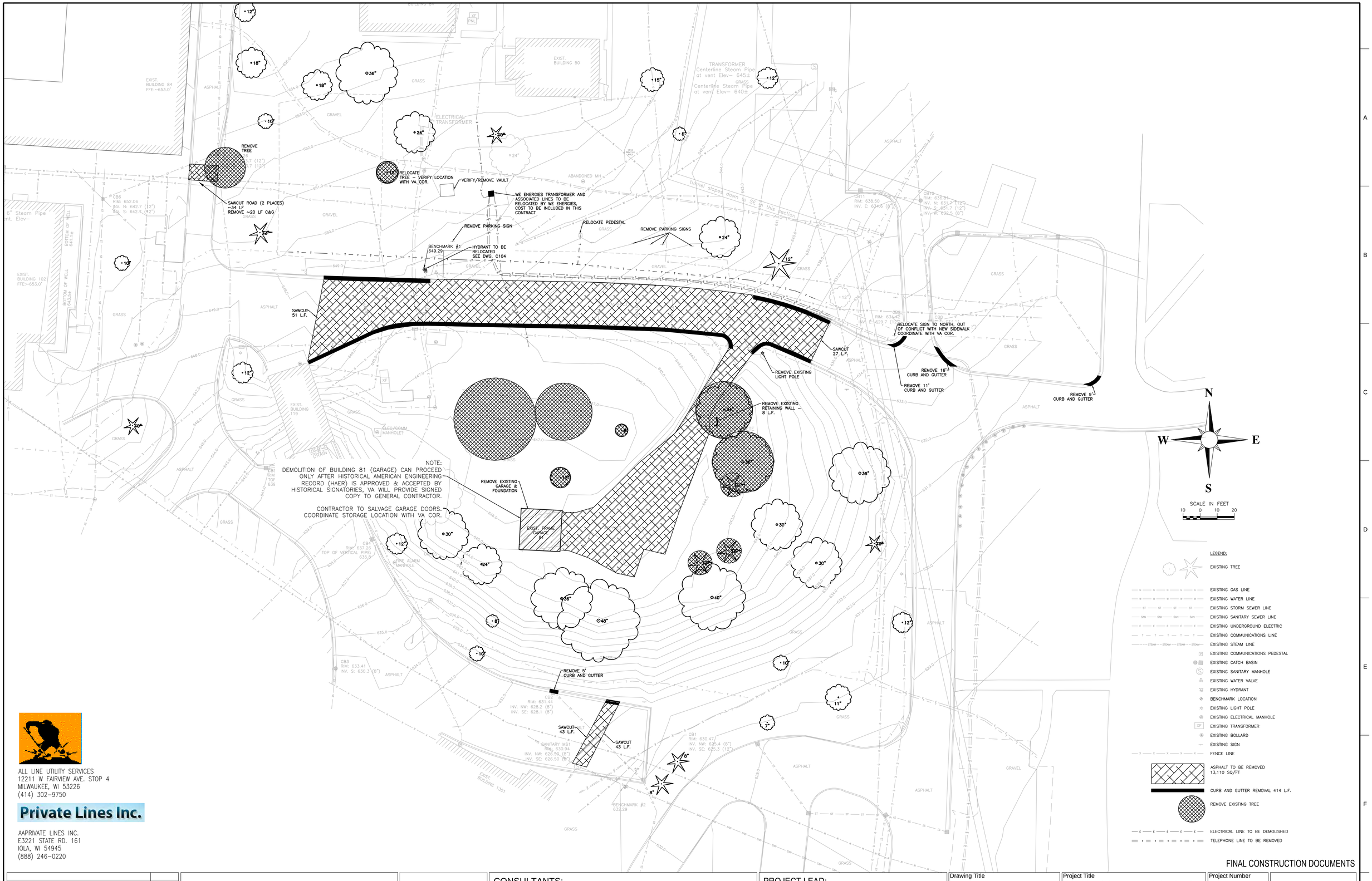
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025

MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

Drawing Title	OVERALL EXISTING SITE CONDITIONS
Approved: Project Director	
Project Title	Provide Fisher House Infrastructure
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	DJC
Drawn By:	NLB
Project Number	695-13-118
Building Number	-
Drawing Number	C100

Office of Facilities Management
Department of Veterans Affairs

VA FORM 08-6231, OCT 1978



ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302-9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246-0220

FINAL CONSTRUCTION DOCUMENTS

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates
Landscape Architects

Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
© CBE 2002-2012

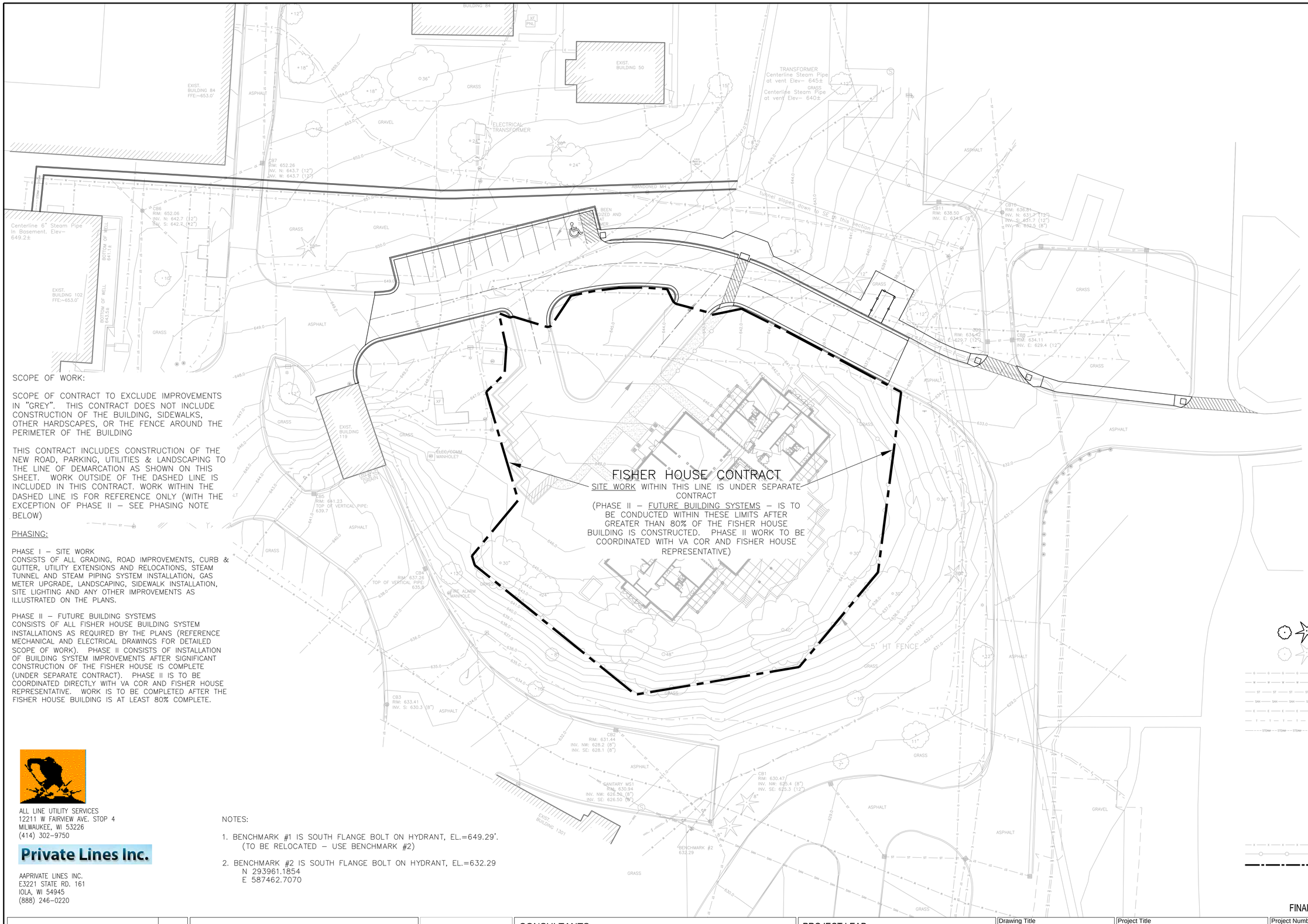
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI, 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025

MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 109
MILWAUKEE, WI, 53226
PHONE: (414) 258-6004
FAX: (414) 258-6194

Drawing Title	SITE DEMOLITION PLAN
Approved: Project Director	
Project Title	Provide Fisher House Infrastructure
Project Number	695-13-118
Building Number	-
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	DJC
Drawn By:	NLB
Drawing Number	C101

Office of Facilities Management
Department of Veterans Affairs

VA FORM 08-6231, OCT 1978



SCOPE OF WORK:

SCOPE OF CONTRACT TO EXCLUDE IMPROVEMENTS IN "GREY". THIS CONTRACT DOES NOT INCLUDE CONSTRUCTION OF THE BUILDING, SIDEWALKS, OTHER HARDSCAPES, OR THE FENCE AROUND THE PERIMETER OF THE BUILDING

THIS CONTRACT INCLUDES CONSTRUCTION OF THE NEW ROAD, PARKING, UTILITIES & LANDSCAPING TO THE LINE OF DEMARCATION AS SHOWN ON THIS SHEET. WORK OUTSIDE OF THE DASHED LINE IS INCLUDED IN THIS CONTRACT. WORK WITHIN THE DASHED LINE IS FOR REFERENCE ONLY (WITH THE EXCEPTION OF PHASE II – SEE PHASING NOTE BELOW)

PHASING:

PHASE I – SITE WORK
CONSISTS OF ALL GRADING, ROAD IMPROVEMENTS, CURB & GUTTER, UTILITY EXTENSIONS AND RELOCATIONS, STEAM TUNNEL AND STEAM PIPING SYSTEM INSTALLATION, GAS METER UPGRADE, LANDSCAPING, SIDEWALK INSTALLATION, SITE LIGHTING AND ANY OTHER IMPROVEMENTS AS ILLUSTRATED ON THE PLANS.

PHASE II – FUTURE BUILDING SYSTEMS
CONSISTS OF ALL FISHER HOUSE BUILDING SYSTEM INSTALLATIONS AS REQUIRED BY THE PLANS (REFERENCE MECHANICAL AND ELECTRICAL DRAWINGS FOR DETAILED SCOPE OF WORK). PHASE II CONSISTS OF INSTALLATION OF BUILDING SYSTEM IMPROVEMENTS AFTER SIGNIFICANT CONSTRUCTION OF THE FISHER HOUSE IS COMPLETE (UNDER SEPARATE CONTRACT). PHASE II IS TO BE COORDINATED DIRECTLY WITH VA COR AND FISHER HOUSE REPRESENTATIVE. WORK IS TO BE COMPLETED AFTER THE FISHER HOUSE BUILDING IS AT LEAST 80% COMPLETE.

NOTES:

1. BENCHMARK #1 IS SOUTH FLANGE BOLT ON HYDRANT, EL.=649.29'. (TO BE RELOCATED – USE BENCHMARK #2)
2. BENCHMARK #2 IS SOUTH FLANGE BOLT ON HYDRANT, EL.=632.29
   N 293961.1854
   E 587462.7070

LEGEND:
- EXISTING HIGH QUALITY TREE
- EXISTING LOW QUALITY TREE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING STORM SEWER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING COMMUNICATIONS LINE
- EXISTING STEAM LINE
- EXISTING COMMUNICATIONS PEDESTAL
- EXISTING CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING WATER VALVE
- EXISTING HYDRANT
- BENCHMARK LOCATION
- EXISTING LIGHT POLE
- EXISTING ELECTRICAL MANHOLE
- EXISTING TRANSFORMER
- EXISTING BOLLARD
- EXISTING SIGN
- EXISTING FENCE LINE
- PROPOSED FENCE (BY OTHERS)
- EXTENT OF WORK

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302-9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246-0220

FINAL CONSTRUCTION DOCUMENTS

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates
Landscape Architects
Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
© CBE 2000-2012

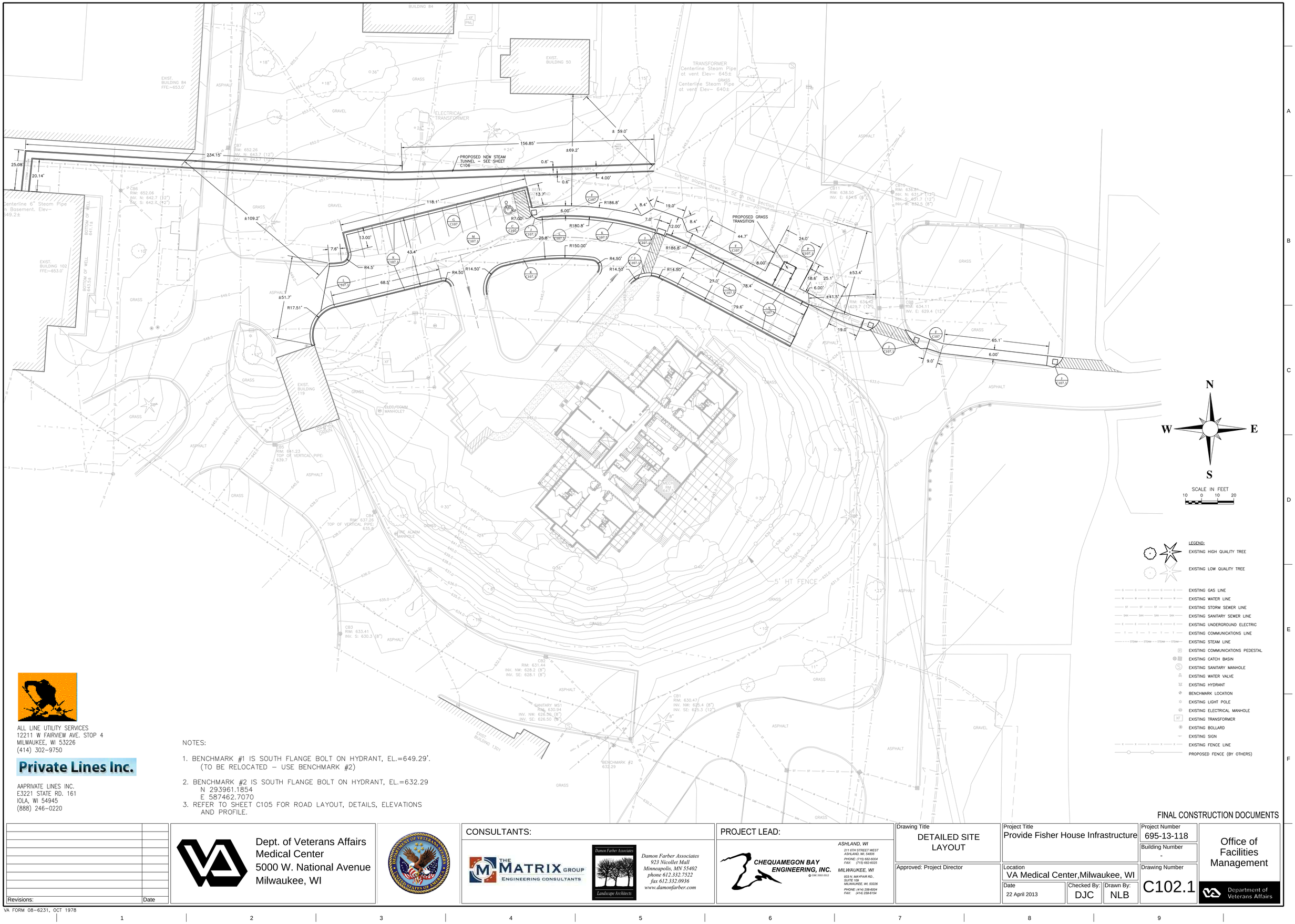
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025

MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

Drawing Title	PROPOSED SITE LAYOUT & SCOPE DESCRIPTION
Approved: Project Director	
Project Title	Provide Fisher House Infrastructure
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	DJC
Drawn By:	NLB
Project Number	695-13-118
Building Number	-
Drawing Number	C102

Office of Facilities Management
Department of Veterans Affairs

VA FORM 08-6231, OCT 1978



LEGEND:

- EXISTING HIGH QUALITY TREE
- EXISTING LOW QUALITY TREE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING STORM SEWER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING COMMUNICATIONS LINE
- EXISTING STEAM LINE
- EXISTING COMMUNICATIONS PEDESTAL
- EXISTING CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING WATER VALVE
- EXISTING HYDRANT
- BENCHMARK LOCATION
- EXISTING LIGHT POLE
- EXISTING ELECTRICAL MANHOLE
- EXISTING TRANSFORMER
- EXISTING BOLLARD
- EXISTING SIGN
- EXISTING FENCE LINE
- PROPOSED FENCE (BY OTHERS)

NOTES:

1. BENCHMARK #1 IS SOUTH FLANGE BOLT ON HYDRANT, EL.=649.29'. (TO BE RELOCATED – USE BENCHMARK #2)
2. BENCHMARK #2 IS SOUTH FLANGE BOLT ON HYDRANT, EL.=632.29
   N 293961.1854
   E 587462.7070
3. REFER TO SHEET C105 FOR ROAD LAYOUT, DETAILS, ELEVATIONS AND PROFILE.

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302-9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246-0220

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates
Landscape Architects

Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
© CBE 2002-2012

ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025

MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

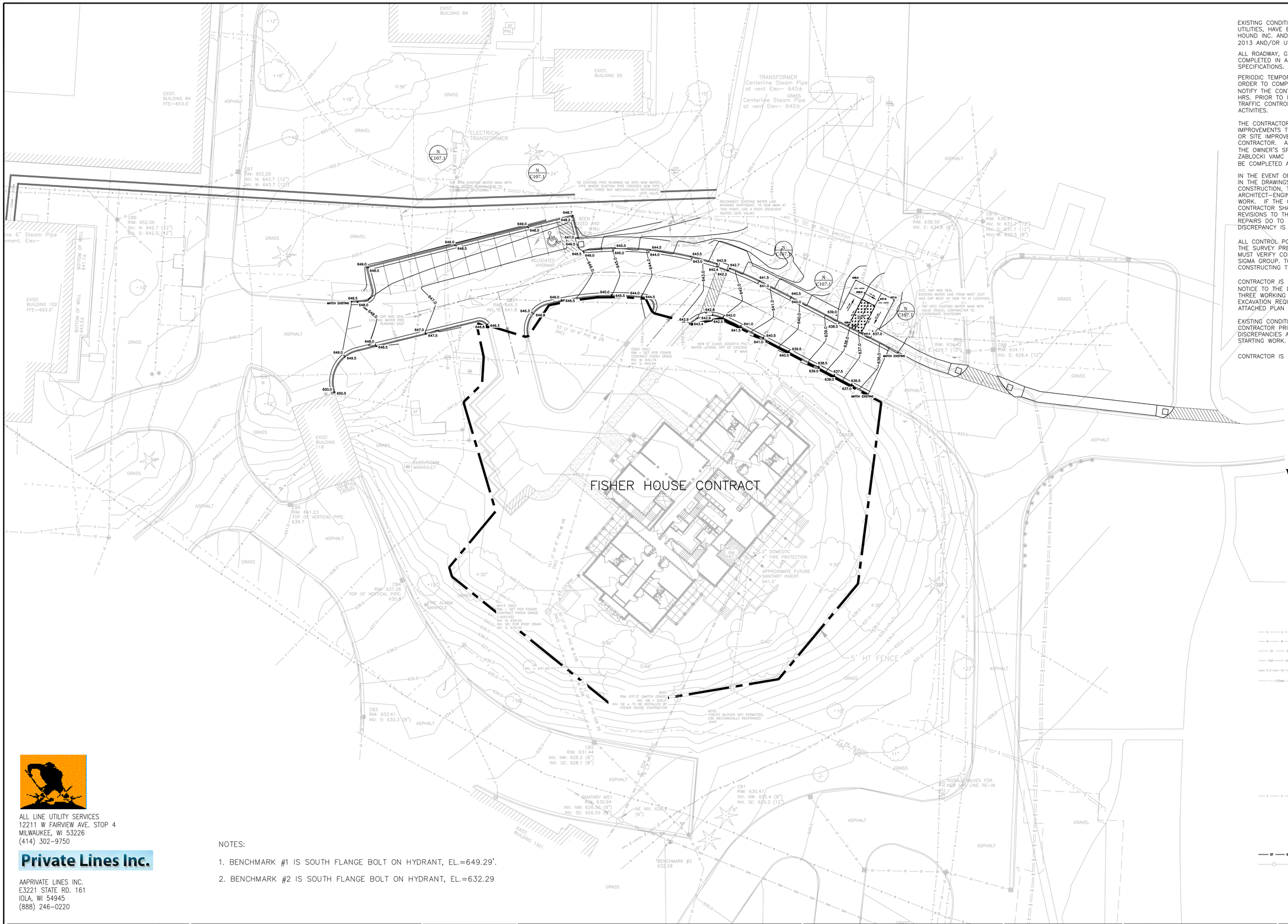
Drawing Title	DETAILED SITE LAYOUT
Approved: Project Director	
Project Title	Provide Fisher House Infrastructure
Project Number	695-13-118
Building Number	-
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	DJC
Drawn By:	NLB
Drawing Number	C102.1

FINAL CONSTRUCTION DOCUMENTS

Office of Facilities Management

Department of Veterans Affairs

VA FORM 08-6231, OCT 1978



EXISTING CONDITIONS AND TOPOGRAPHIC FEATURES, INCLUDING UTILITIES, HAVE BEEN LOCATED FROM FIELD LOCATES BY BLOOD HOUND INC. AND SURVEY BY THE SIGMA GROUP DATED JANUARY 2013 AND/OR UTILITY RECORDS.

ALL ROADWAY, GRADING AND OTHER SITE WORK MUST BE COMPLETED IN ACCORDANCE WITH THE STANDARD VA SPECIFICATIONS.

PERIODIC TEMPORARY TRAFFIC CONTROL MAY BE REQUIRED IN ORDER TO COMPLETE SITE WORK. THE CONTRACTOR MUST NOTIFY THE CONTRACTING OFFICER'S REPRESENTATIVE (COR) 24 HRS. PRIOR TO IMPACTING ANY TRAFFIC LANES. TEMPORARY TRAFFIC CONTROL WILL BE INCIDENTAL TO THE CONSTRUCTION ACTIVITIES.

THE CONTRACTOR SHALL PROTECT ALL UTILITIES AND SITE IMPROVEMENTS TO REMAIN. ANY DAMAGE TO EXISTING UTILITIES OR SITE IMPROVEMENTS TO REMAIN SHALL BE REPAIRED BY THE CONTRACTOR. ANY NECESSARY REPAIRS MUST BE REPAIRED TO THE OWNER'S SPECIFICATIONS AND COORDINATED WITH THE ZABLOCKI VAMC COR. NECESSARY REPAIRS FOR DAMAGE WILL BE COMPLETED AT THE CONTRACTOR'S EXPENSE.

IN THE EVENT OF ANY DISCREPANCIES AND/OR ERRORS FOUND IN THE DRAWINGS, OR IF PROBLEMS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE COR AND ARCHITECT-ENGINEER IMMEDIATELY, PRIOR TO PROCEEDING WITH WORK. IF THE COR IS NOT NOTIFIED IMMEDIATELY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ANY REVISIONS TO THE PLANS AND SPECIFICATIONS, AS WELL AS REPAIRS DO TO CONTINUED CONSTRUCTION AFTER AN ERROR OR DISCREPANCY IS FOUND.

ALL CONTROL POINTS AND COORDINATES LISTED ARE BASED ON THE SURVEY PREPARED BY THE SIGMA GROUP. CONTRACTOR MUST VERIFY CONTROL POINTS IN THE FIELD AND WITH THE SIGMA GROUP, TO CONFIRM THEY ARE VALID PRIOR TO CONSTRUCTING THE SITE LAYOUT.

CONTRACTOR IS SOLELY RESPONSIBLE TO PROVIDE ADVANCED NOTICE TO THE DESIGNATED "ONE CALL SYSTEM" NOT LESS THAN THREE WORKING DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION REQUIRED TO PERFORM WORK CONTAINED ON THE ATTACHED PLAN SET.

EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF ANY WORK. DISCREPANCIES ARE TO BE REPORTED TO THE COR PRIOR TO STARTING WORK.

CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION STAKING.

N
W E
S

SCALE IN FEET
10 0 10 20

LEGEND:

- EXISTING HIGH QUALITY TREE
- EXISTING LOW QUALITY TREE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING STORM SEWER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING COMMUNICATIONS LINE
- EXISTING STEAM LINE
- EXISTING COMMUNICATIONS PEDESTAL
- EXISTING CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING WATER VALVE
- EXISTING HYDRANT
- BENCHMARK LOCATION
- EXISTING LIGHT POLE
- EXISTING ELECTRICAL MANHOLE
- EXISTING TRANSFORMER
- EXISTING BOLLARD
- EXISTING SIGN
- EXISTING FENCE LINE
- PROPOSED WATER VALVE
- PROPOSED GAS VALVE
- PROPOSED ROOF DRAIN COLLECTION POINT
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED STORM SEWER
- PROPOSED FENCE (BY OTHERS)
- 646.5 PROPOSED SPOT ELEVATION
- NIC NOT IN CONTRACT

FINAL CONSTRUCTION DOCUMENTS

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302-9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246-0220

NOTES:

1. BENCHMARK #1 IS SOUTH FLANGE BOLT ON HYDRANT, EL.=649.29'.
2. BENCHMARK #2 IS SOUTH FLANGE BOLT ON HYDRANT, EL.=632.29

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
© CBE 2002-2012

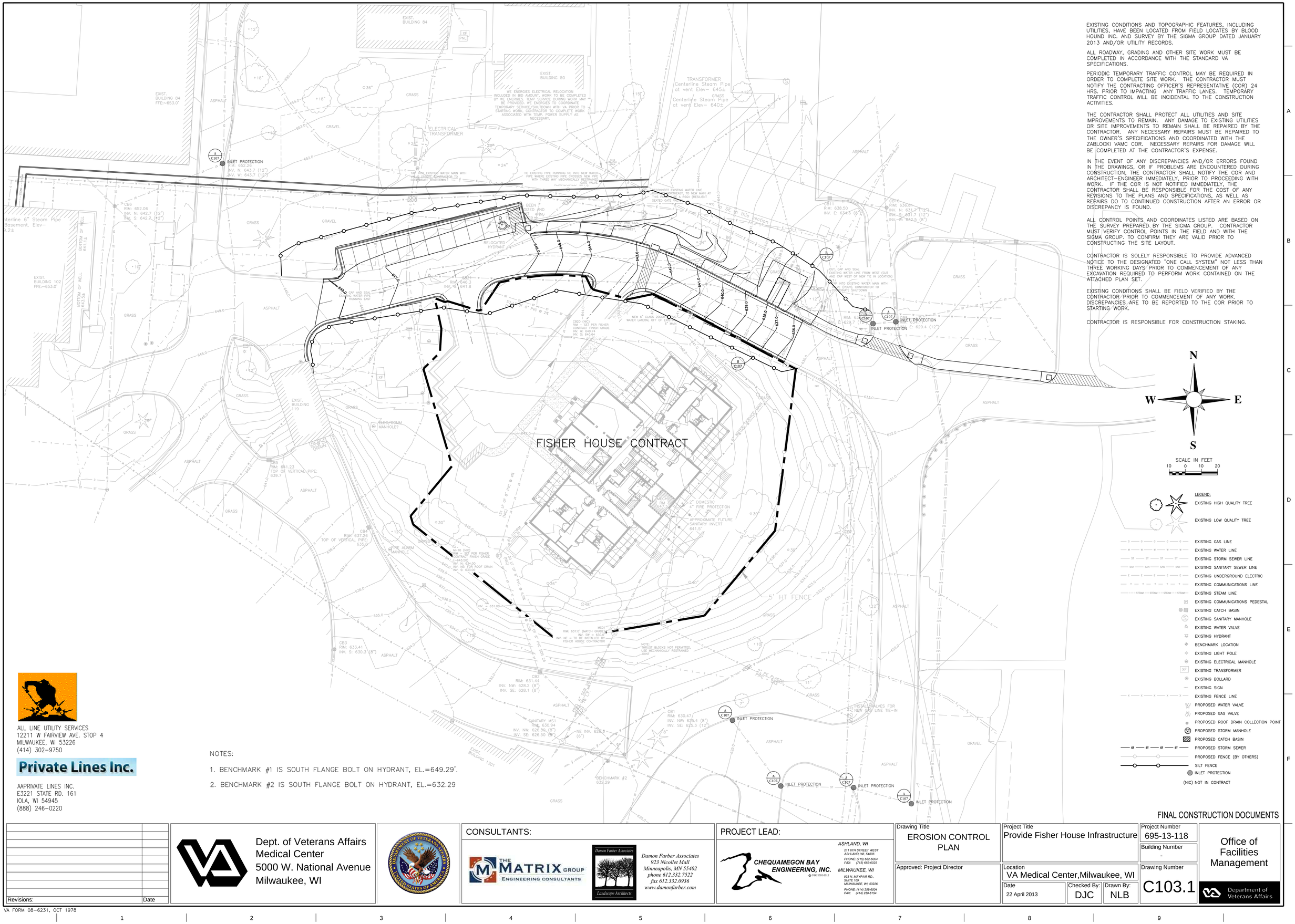
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025

MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

Drawing Title	PROPOSED SITE GRADING PLAN
Approved: Project Director	
Project Title	Provide Fisher House Infrastructure
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	DJC
Drawn By:	NLB
Project Number	695-13-118
Building Number	-
Drawing Number	C103

Office of Facilities Management
Department of Veterans Affairs

VA FORM 08-6231, OCT 1978



ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302-9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246-0220

NOTES:

1. BENCHMARK #1 IS SOUTH FLANGE BOLT ON HYDRANT, EL.=649.29'.
2. BENCHMARK #2 IS SOUTH FLANGE BOLT ON HYDRANT, EL.=632.29

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates
Landscape Architects
Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
CBE 3002-3012
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI, 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025
MILWAUKEE, WI
933 N. MAYFAIR RD., STE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

FINAL CONSTRUCTION DOCUMENTS

Drawing Title	EROSION CONTROL PLAN
Project Title	Provide Fisher House Infrastructure
Project Number	695-13-118
Building Number	-
Approved: Project Director	
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	DJC
Drawn By:	NLB
Drawing Number	C103.1

Office of Facilities Management
Department of Veterans Affairs

VA FORM 08-6231, OCT 1978

SCOPE OF WORK:

SCOPE OF CONTRACT TO EXCLUDE IMPROVEMENTS IN "GREY". THIS CONTRACT DOES NOT INCLUDE CONSTRUCTION OF THE BUILDING, SIDEWALKS, OTHER HARDSCAPES, OR THE FENCE AROUND THE PERIMETER OF THE BUILDING

THIS CONTRACT INCLUDES CONSTRUCTION OF THE NEW ROAD, PARKING, UTILITIES & LANDSCAPING TO THE LINE OF DEMARCATION AS SHOWN ON THIS SHEET. WORK OUTSIDE OF THE DASHED LINE IS INCLUDED IN THIS CONTRACT. WORK WITHIN THE DASHED LINE IS FOR REFERENCE ONLY (WITH THE EXCEPTION OF PHASE II – SEE PHASING NOTE BELOW)

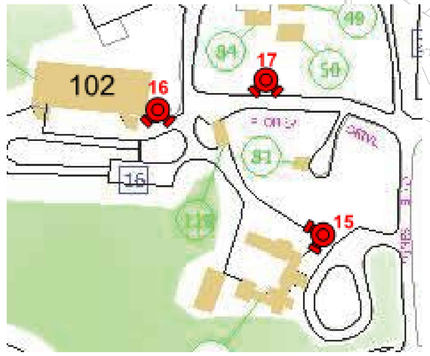
GENERAL UTILITY NOTES:
DUE TO SITE CONSTRAINTS AND EXISTING UTILITIES, WHERE CONTRACTOR RUNS INTO CONFLICTS WITH EXISTING UTILITIES; EXISTING PIPES/CONDUIT/DUCTBANK/ETC. UTILITY IS TO BE SUPPORTED AND WORKED UNDER OR OVER DEPENDING ON TYPE OF UTILITY CONFLICT.

1. EXISTING WATER LINES TO BE CUT AND CAPPED AT LOCATIONS SHOWN. LINES TO BE LEFT IN PLACE. NEW LINE TO BE INSTALLED NORTH OF ROAD IMPROVEMENTS AS SHOW. CONTRACTOR TO VERIFY SIZE OF EXISTING LINE DURING CAPPING ACTIVITIES. NEW WATER PIPE TO MATCH EXISTING SIZE. MATERIAL TO BE AWWA PVC PRESSURE PIPE, CLASS TO BE DETERMINED BASED ON SIZE. (ASSUME 6" CLASS 200 DR 14 FOR BIDDING)

NOTES:

1. BENCHMARK #1 IS SOUTH FLANGE BOLT ON HYDRANT, EL.=649.29'.
2. BENCHMARK #2 IS SOUTH FLANGE BOLT ON HYDRANT, EL.=632.29

FIRE HYDRANT LOCATIONS AND FLOWS PROVIDED BY VA



FLOW @	ORIFICE SIZE	GPM	PITOT(PSI)	STATIC(PSI)	RESIDUAL(PSI)
15	1.75"	575	40	55	35
16	2.5"	1155	40	55	35
17	2.5"	1155	40	55	35

FIRE HYDRANT 17 TO BE RELOCATED TO NEW LOCATION AS SHOWN. FLOW TESTS SHOW A CAPACITY OF 1,155 GPM AT THE HYDRANT. ESTIMATED LOADS ON 6" PIPE: 4" FIRE PROTECTION ~600 GPM, 2" IRRIGATION ~150 GPM, ~2" POTABLE ~150 GPM –> TOTAL ~ 900 GPM MAX. FLOW TESTS CONFIRM LINE CAPACITY.

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302-9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246-0220

LEGEND:

- EXISTING HIGH QUALITY TREE
- EXISTING LOW QUALITY TREE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING STORM SEWER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING COMMUNICATIONS LINE
- EXISTING STEAM LINE
- EXISTING COMMUNICATIONS PEDESTAL
- EXISTING CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING WATER VALVE
- EXISTING HYDRANT
- BENCHMARK LOCATION
- EXISTING LIGHT POLE
- EXISTING ELECTRICAL MANHOLE
- EXISTING TRANSFORMER
- EXISTING BOLLARD
- EXISTING SIGN
- EXISTING FENCE LINE
- PROPOSED 2" GAS LINE
- PROPOSED WATER LINE (2"&4")
- PROPOSED 6" STORM SEWER FOR ROOF DRAINS
- PROPOSED 6" SANITARY
- PROPOSED 2" IRRIGATION SERVICE
- PROPOSED ELECTRIC
- PROPOSED WATER VALVE
- PROPOSED GAS VALVE
- PROPOSED ROOF DRAIN COLLECTION POINT
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED SANITARY MANHOLE
- PROPOSED FENCE (BY OTHERS)
- POTENTIAL UTILITY CONFLICT, POTENTIAL HAND DIG & SUPPORT

FINAL CONSTRUCTION DOCUMENTS

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates
Landscape Architects

Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
© CBE 2002-2012

ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025

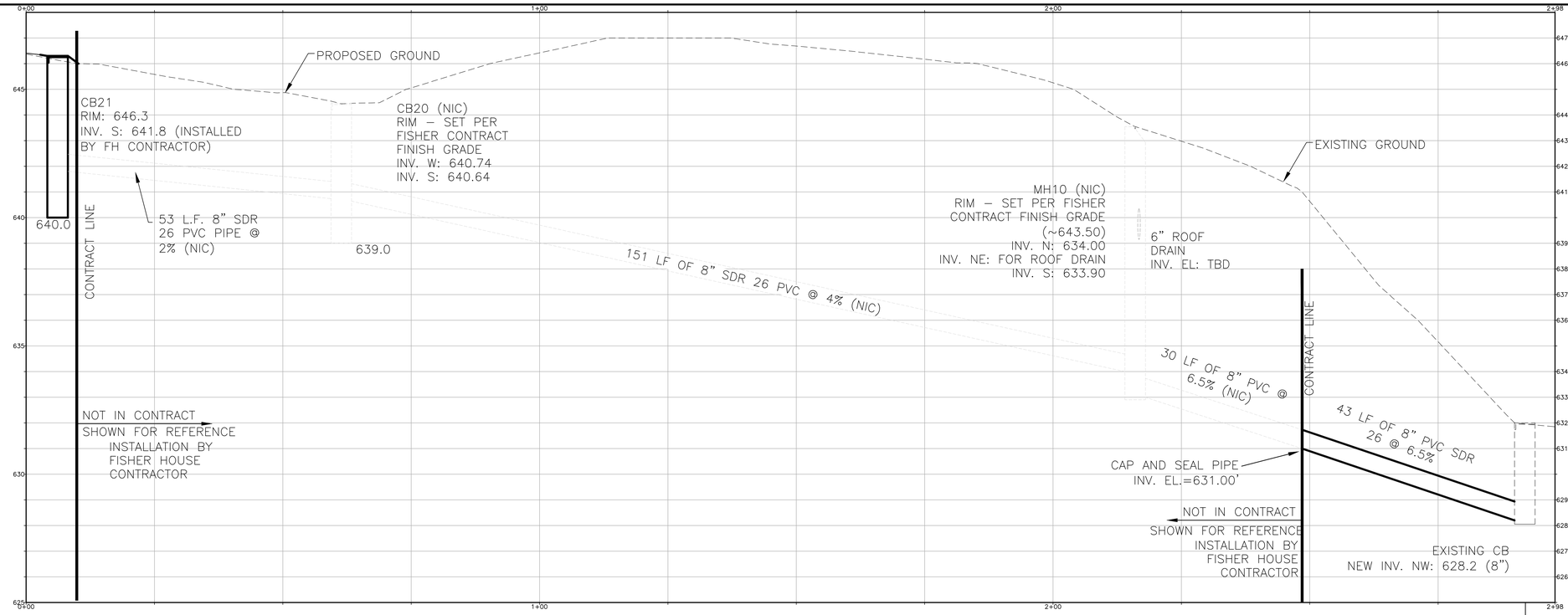
MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

Drawing Title	PROPOSED SITE UTILITY LAYOUT
Project Title	Provide Fisher House Infrastructure
Project Number	695-13-118
Building Number	-
Approved: Project Director	
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	DJC
Drawn By:	NLB
Drawing Number	C104

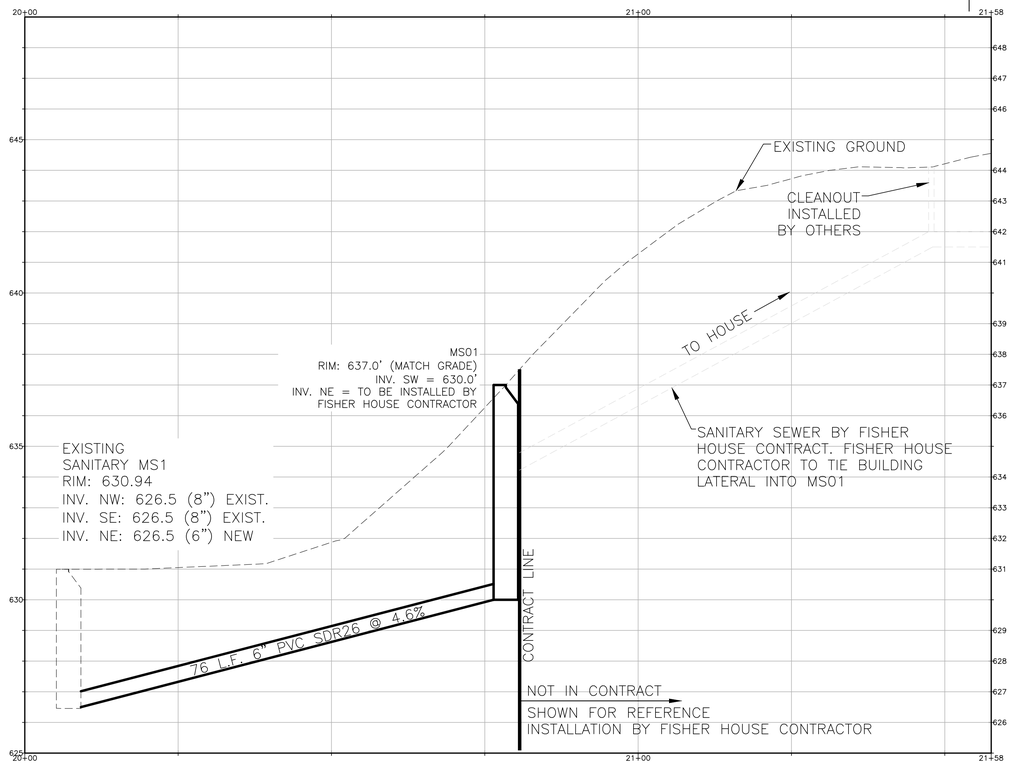
Office of Facilities Management

Department of Veterans Affairs

VA FORM 08-6231, OCT 1978



STORM SEWER PROFILE A
SCALE: 1"=10'
VERTICAL EXAGGERATION 5x



SANITARY SEWER PROFILE B
SCALE: 1"=10'
VERTICAL EXAGGERATION 5x

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302-9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246-0220

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates
Landscape Architects

Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
© CBE 2002-2012

ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025

MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

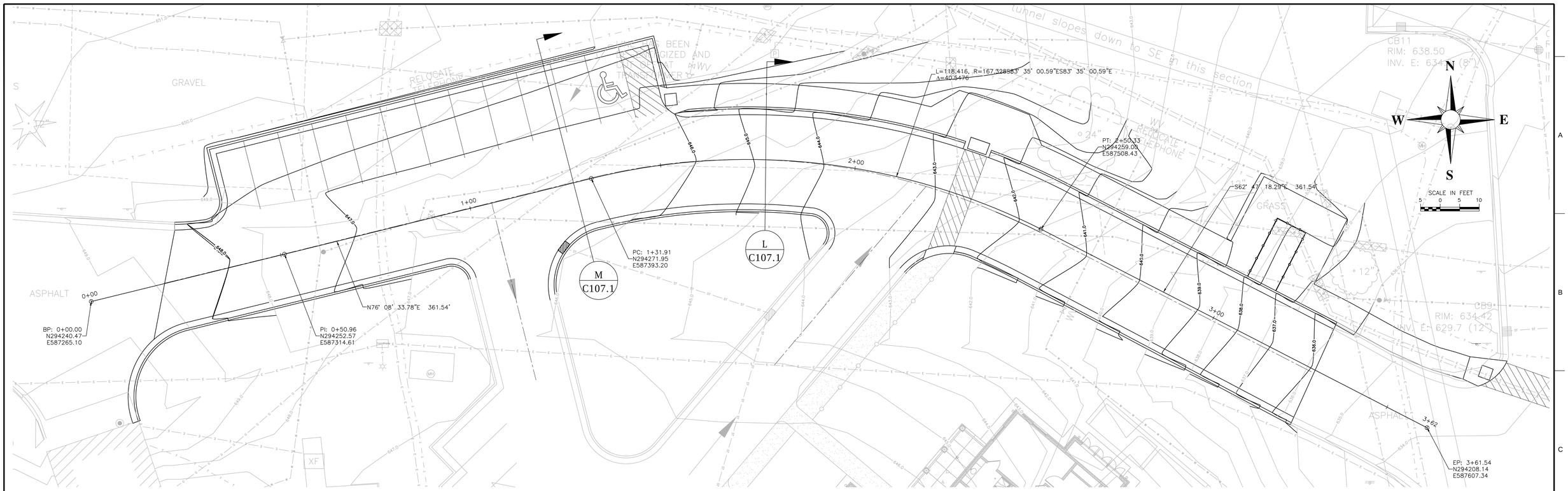
FINAL CONSTRUCTION DOCUMENTS

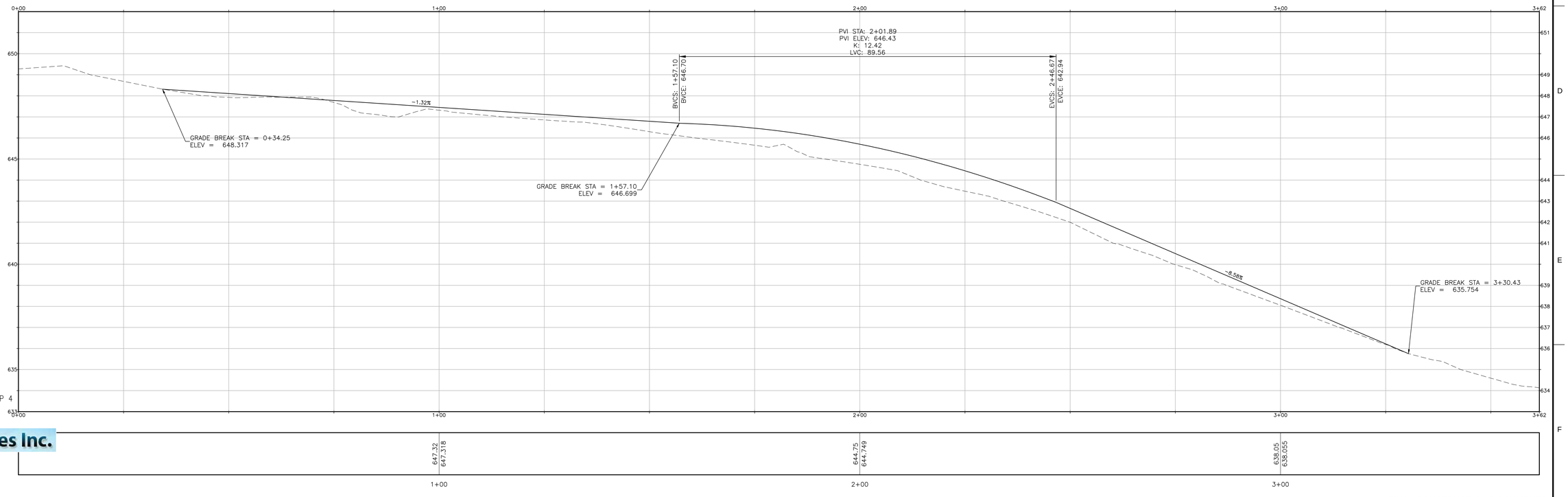
Drawing Title	UTILITY PROFILES
Approved: Project Director	
Project Title	Provide Fisher House Infrastructure
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	DJC
Drawn By:	NLB
Project Number	695-13-118
Building Number	-
Drawing Number	C104.1

Office of Facilities Management

Department of Veterans Affairs

VA FORM 08-6231, OCT 1978





ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302-9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246-0220

FINAL CONSTRUCTION DOCUMENTS

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates — Landscape Architects

Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
© CBE 2002-2012

ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025

MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

Drawing Title	ROAD PROFILE & DETAILS
Project Title	Provide Fisher House Infrastructure
Project Number	695-13-118
Building Number	-
Approved: Project Director	
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	DJC
Drawn By:	NLB
Drawing Number	C105

Office of Facilities Management
Department of Veterans Affairs

VA FORM 08-6231, OCT 1978

EXISTING CONDITIONS AND TOPOGRAPHIC FEATURES, INCLUDING UTILITIES, HAVE BEEN LOCATED FROM FIELD LOCATES BY BLOOD HOUND INC. AND SURVEY BY THE SIGMA GROUP DATED JANUARY 2013 AND/OR UTILITY RECORDS.

ALL ROADWAY, GRADING AND OTHER SITE WORK MUST BE COMPLETED IN ACCORDANCE WITH THE STANDARD VA SPECIFICATIONS.

PERIODIC TEMPORARY TRAFFIC CONTROL MAY BE REQUIRED IN ORDER TO COMPLETE SITE WORK. THE CONTRACTOR MUST NOTIFY THE CONTRACTING OFFICER'S REPRESENTATIVE (COR) 24 HRS. PRIOR TO IMPACTING ANY TRAFFIC LANES. TEMPORARY TRAFFIC CONTROL WILL BE INCIDENTAL TO THE CONSTRUCTION ACTIVITIES.

THE CONTRACTOR SHALL PROTECT ALL UTILITIES AND SITE IMPROVEMENTS TO REMAIN. ANY DAMAGE TO EXISTING UTILITIES OR SITE IMPROVEMENTS TO REMAIN SHALL BE REPAIRED BY THE CONTRACTOR. ANY NECESSARY REPAIRS MUST BE REPAIRED TO THE OWNER'S SPECIFICATIONS AND COORDINATED WITH THE ZABLOCKI VAMC COR. NECESSARY REPAIRS FOR DAMAGE WILL BE COMPLETED AT THE CONTRACTOR'S EXPENSE.

IN THE EVENT OF ANY DISCREPANCIES AND/OR ERRORS FOUND IN THE DRAWINGS, OR IF PROBLEMS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE COR AND ARCHITECT–ENGINEER IMMEDIATELY, PRIOR TO PROCEEDING WITH WORK. IF THE COR IS NOT NOTIFIED IMMEDIATELY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ANY REVISIONS TO THE PLANS AND SPECIFICATIONS, AS WELL AS REPAIRS DO TO CONTINUED CONSTRUCTION AFTER AN ERROR OR DISCREPANCY IS FOUND.

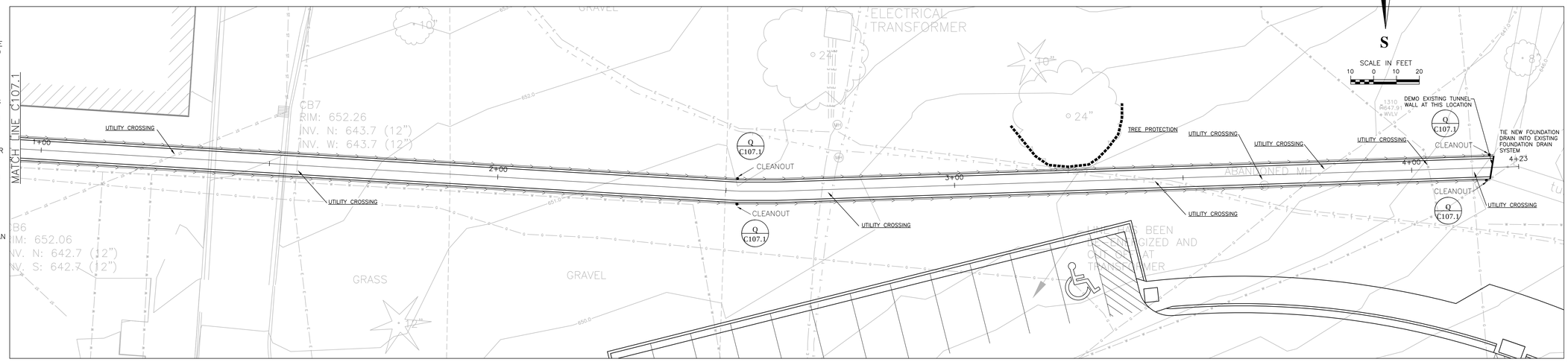
ALL CONTROL POINTS AND COORDINATES LISTED ARE BASED ON THE SURVEY PREPARED BY THE SIGMA GROUP. CONTRACTOR MUST VERIFY CONTROL POINTS IN THE FIELD AND WITH THE SIGMA GROUP. TO CONFIRM THEY ARE VALID PRIOR TO CONSTRUCTING THE SITE LAYOUT.

CONTRACTOR IS SOLELY RESPONSIBLE TO PROVIDE ADVANCED NOTICE TO THE DESIGNATED "ONE CALL SYSTEM" NOT LESS THAN THREE WORKING DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION REQUIRED TO PERFORM WORK CONTAINED ON THE ATTACHED PLAN SET.

EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF ANY WORK. DISCREPANCIES ARE TO BE REPORTED TO THE COR PRIOR TO STARTING WORK.

CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION STAKING.

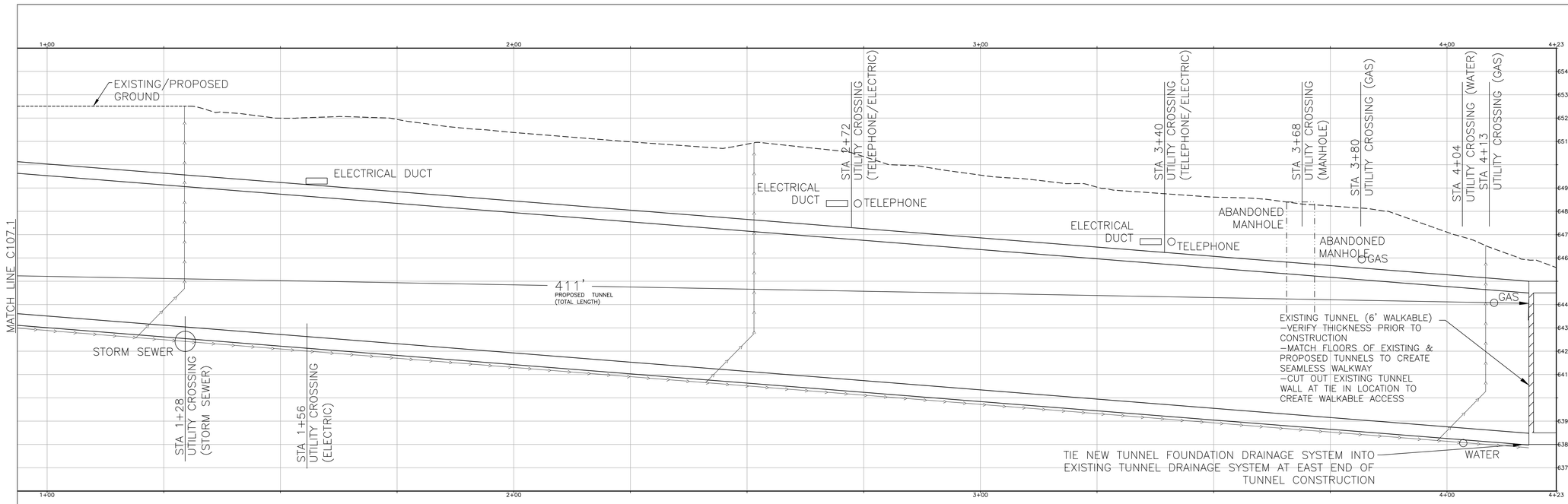
CONTRACTOR IS RESPONSIBLE FOR EARTH RETENTION SYSTEM DESIGN ASSOCIATED WITH TUNNEL INSTALLATION, WHERE SITE CONSTRAINTS DO NOT ALLOW STEPPED EXCAVATION.



NOTE:
AS TUNNEL IS CONSTRUCTED CONTRACTOR TO INSTALL FENCING TO KEEP PEDESTRIANS OUT OF EXCAVATION. ALL EXCAVATION TO BE COVERED/PROTECTED AT THE END OF EACH DAY

NOTE:
PROPOSED TUNNEL PROFILE BASED ON EXISTING CONSTRUCTION AVAILABLE RECORDS. GENERAL CONTRACTOR TO VERIFY EXISTING FOUNDATION ELEVATIONS PRIOR TO ANY CONSTRUCTION, AND NOTIFY ENGINEER IF ANY CONFLICTS ARE FOUND. UNDERPINNING OF EXISTING FOUNDATION IS NOT ANTICIPATED. GENERAL CONTRACTOR TO PROVIDE EARTH RETENTION SYSTEMS, AS NECESSARY, TO PREVENT UNDERMINING OF EXISTING STRUCTURES. ANY DAMAGE TO EXISTING STRUCTURES AS A RESULT OF CONSTRUCTION METHODS EMPLOYED SHALL BE REPAIRED AT NO EXPENSE TO OWNER.

LEGEND:
- EXISTING HIGH QUALITY TREE
- EXISTING LOW QUALITY TREE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING STORM SEWER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING COMMUNICATIONS LINE
- EXISTING STEAM LINE
- EXISTING COMMUNICATIONS PEDESTAL
- EXISTING CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING WATER VALVE
- EXISTING HYDRANT
- BENCHMARK LOCATION
- EXISTING LIGHT POLE
- EXISTING ELECTRICAL MANHOLE
- EXISTING TRANSFORMER
- EXISTING BOLLARD
- EXISTING SIGN
- EXISTING FENCE LINE
- PROPOSED FENCE (BY OTHERS)



CAST IN PLACE STEAM TUNNEL PROFILE
SCALE 1"=20'
5x VERTICAL EXAGGERATION

NOTE:
UTILITY CROSSINGS ARE ESTIMATES OF DEPTH AND LOCATION SHOWN FOR BIDDING PURPOSES. EXACT LOCATION & DEPTH TO BE VERIFIED IN THE FIELD AND UTILITY TO BE FORMED AROUND OR RELOCATED AS NECESSARY. ONCE EXPOSED, CONFLICTS AND DETAILS (LOCATION/ELEVATION) TO BE SUBMITTED TO VA COR AND AE PRIOR TO FURTHER CONSTRUCTION. AE TO REVIEW LOCATION AND ELEVATIONS OF EXPOSED EXISTING UTILITIES FOR DESIGN CONSIDERATIONS.

FINAL CONSTRUCTION DOCUMENTS

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302–9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246–0220

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates
Landscape Architects
Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
© CBE 2002-2012
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025
MILWAUKEE, WI
933 N. MAYFAIR RD.,
SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

Drawing Title	STEAM TUNNEL EAST PLAN AND PROFILE
Approved: Project Director	
Project Title	Provide Fisher House Infrastructure
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	DJC
Drawn By:	NLB
Project Number	695-13-118
Building Number	-
Drawing Number	C106

Office of Facilities Management
Department of Veterans Affairs

VA FORM 08–6231, OCT 1978

EXISTING CONDITIONS AND TOPOGRAPHIC FEATURES, INCLUDING UTILITIES, HAVE BEEN LOCATED FROM FIELD LOCATES BY BLOOD HOUND INC. AND SURVEY BY THE SIGMA GROUP DATED JANUARY 2013 AND/OR UTILITY RECORDS.

ALL ROADWAY, GRADING AND OTHER SITE WORK MUST BE COMPLETED IN ACCORDANCE WITH THE STANDARD VA SPECIFICATIONS.

PERIODIC TEMPORARY TRAFFIC CONTROL MAY BE REQUIRED IN ORDER TO COMPLETE SITE WORK. THE CONTRACTOR MUST NOTIFY THE CONTRACTING OFFICER'S REPRESENTATIVE (COR) 24 HRS. PRIOR TO IMPACTING ANY TRAFFIC LANES. TEMPORARY TRAFFIC CONTROL WILL BE INCIDENTAL TO THE CONSTRUCTION ACTIVITIES.

THE CONTRACTOR SHALL PROTECT ALL UTILITIES AND SITE IMPROVEMENTS TO REMAIN. ANY DAMAGE TO EXISTING UTILITIES OR SITE IMPROVEMENTS TO REMAIN SHALL BE REPAIRED BY THE CONTRACTOR. ANY NECESSARY REPAIRS MUST BE REPAIRED TO THE OWNER'S SPECIFICATIONS AND COORDINATED WITH THE ZABLOCKI VAMC COR. NECESSARY REPAIRS FOR DAMAGE WILL BE COMPLETED AT THE CONTRACTOR'S EXPENSE.

IN THE EVENT OF ANY DISCREPANCIES AND/OR ERRORS FOUND IN THE DRAWINGS, OR IF PROBLEMS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE COR AND ARCHITECT–ENGINEER IMMEDIATELY, PRIOR TO PROCEEDING WITH WORK. IF THE COR IS NOT NOTIFIED IMMEDIATELY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ANY REVISIONS TO THE PLANS AND SPECIFICATIONS, AS WELL AS REPAIRS DO TO CONTINUED CONSTRUCTION AFTER AN ERROR OR DISCREPANCY IS FOUND.

ALL CONTROL POINTS AND COORDINATES LISTED ARE BASED ON THE SURVEY PREPARED BY THE SIGMA GROUP. CONTRACTOR MUST VERIFY CONTROL POINTS IN THE FIELD AND WITH THE SIGMA GROUP. TO CONFIRM THEY ARE VALID PRIOR TO CONSTRUCTING THE SITE LAYOUT.

CONTRACTOR IS SOLELY RESPONSIBLE TO PROVIDE ADVANCED NOTICE TO THE DESIGNATED "ONE CALL SYSTEM" NOT LESS THAN THREE WORKING DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION REQUIRED TO PERFORM WORK CONTAINED ON THE ATTACHED PLAN SET.

EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF ANY WORK. DISCREPANCIES ARE TO BE REPORTED TO THE COR PRIOR TO STARTING WORK.

CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION STAKING.

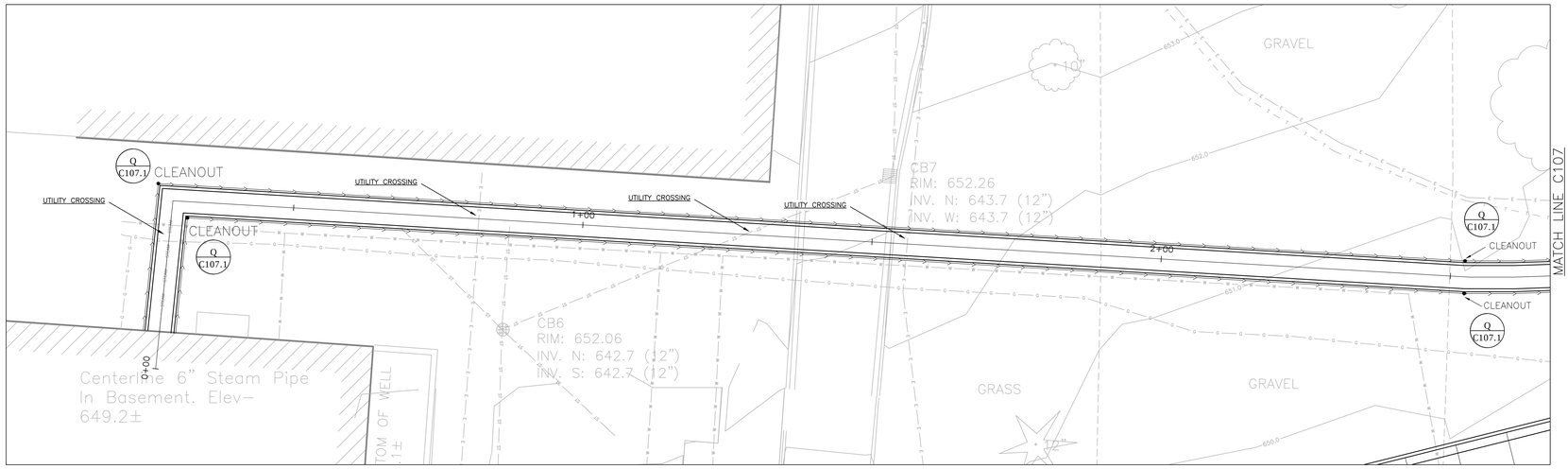
CONTRACTOR IS RESPONSIBLE FOR EARTH RETENTION SYSTEM DESIGN ASSOCIATED WITH TUNNEL INSTALLATION, WHERE SITE CONSTRAINTS DO NOT ALLOW STEPPED EXCAVATION.

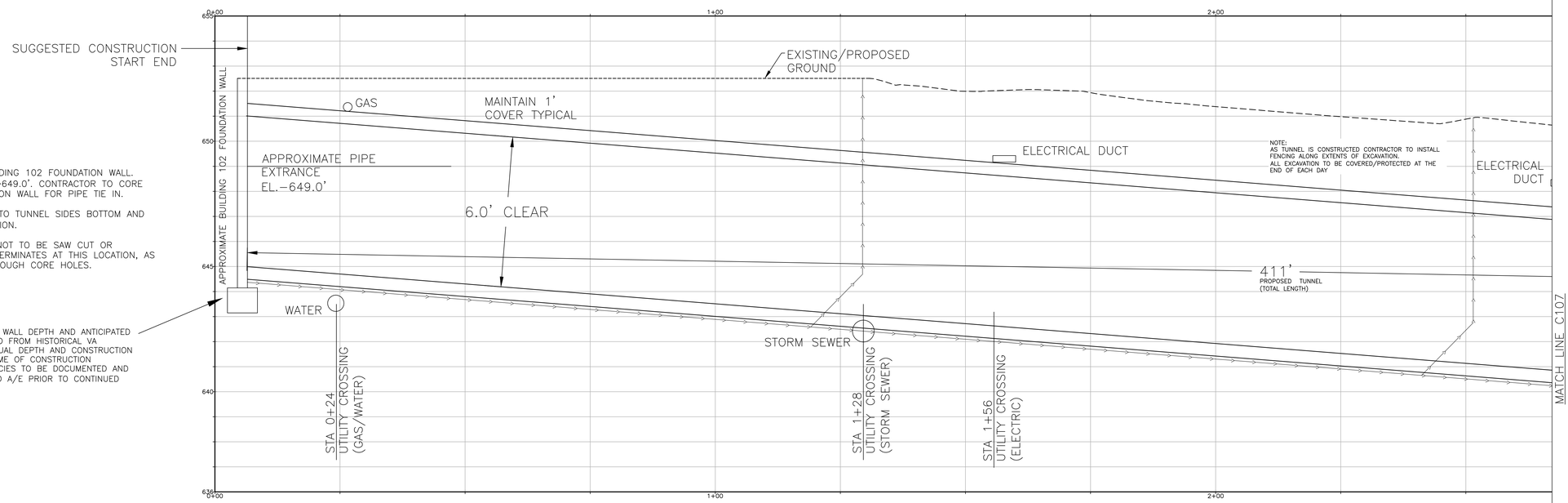
NOTE:
PROPOSED TUNNEL PROFILE BASED ON EXISTING CONSTRUCTION AVAILABLE RECORDS. GENERAL CONTRACTOR TO VERIFY EXISTING FOUNDATION ELEVATIONS PRIOR TO ANY CONSTRUCTION, AND NOTIFY ENGINEER IF ANY CONFLICTS ARE FOUND. UNDERPINNING OF EXISTING FOUNDATION IS NOT ANTICIPATED. GENERAL CONTRACTOR TO PROVIDE EARTH RETENTION SYSTEMS, AS NECESSARY, TO PREVENT UNDERMINING OF EXISTING STRUCTURES. ANY DAMAGE TO EXISTING STRUCTURES AS A RESULT OF CONSTRUCTION METHODS EMPLOYED SHALL BE REPAIRED AT NO EXPENSE TO OWNER.

N
W E
S

SCALE IN FEET
10 0 10 20

LEGEND:
- EXISTING HIGH QUALITY TREE
- EXISTING LOW QUALITY TREE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING STORM SEWER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING COMMUNICATIONS LINE
- EXISTING STEAM LINE
- EXISTING COMMUNICATIONS PEDESTAL
- EXISTING CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING WATER VALVE
- EXISTING HYDRANT
- BENCHMARK LOCATION
- EXISTING LIGHT POLE
- EXISTING ELECTRICAL MANHOLE
- EXISTING TRANSFORMER
- EXISTING BOLLARD
- EXISTING SIGN
- EXISTING FENCE LINE
- PROPOSED FENCE (BY OTHERS)





WALKABLE TUNNEL STOPS AT BUILDING 102 FOUNDATION WALL. PIPE THEN ENTERS BUILDING AT ~649.0'. CONTRACTOR TO CORE THROUGH BUILDING 102 FOUNDATION WALL FOR PIPE TIE IN.

DRILL THROUGH BUILDING WALL INTO TUNNEL SIDES BOTTOM AND TOP FOR DOWEL/REBAR INSTALLATION.

BUILDING 102 FOUNDATION WALL NOT TO BE SAW CUT OR DISTURBED. WALKABLE SECTION TERMINATES AT THIS LOCATION, AS STEAM LINES ENTER BUILDING THROUGH CORE HOLES.

BUILDING 102 FOUNDATION WALL DEPTH AND ANTICIPATED CONSTRUCTION REFERENCED FROM HISTORICAL VA FACILITIES DRAWINGS. ACTUAL DEPTH AND CONSTRUCTION TO BE VERIFIED AT THE TIME OF CONSTRUCTION ACTIVITIES, ANY DISCREPANCIES TO BE DOCUMENTED AND SUBMITTED TO VA COR AND A/E PRIOR TO CONTINUED CONSTRUCTION.

CAST IN PLACE STEAM TUNNEL PROFILE
SCALE 1"=20'
5x VERTICAL EXAGGERATION

NOTE:
UTILITY CROSSINGS ARE ESTIMATES OF DEPTH AND LOCATION SHOWN FOR BIDDING PURPOSES. EXACT LOCATION & DEPTH TO BE VERIFIED IN THE FIELD AND UTILITY TO BE FORMED AROUND OR RELOCATED AS NECESSARY. ONCE EXPOSED, CONFLICTS AND DETAILS (LOCATION/ELEVATION) TO BE SUBMITTED TO VA COR AND AE PRIOR TO FURTHER CONSTRUCTION. AE TO REVIEW CONTRACTORS METHOD OF CONSTRUCTION FOR CROSSING EXISTING UTILITY.

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302–9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246–0220

FINAL CONSTRUCTION DOCUMENTS

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates
Landscape Architects
Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

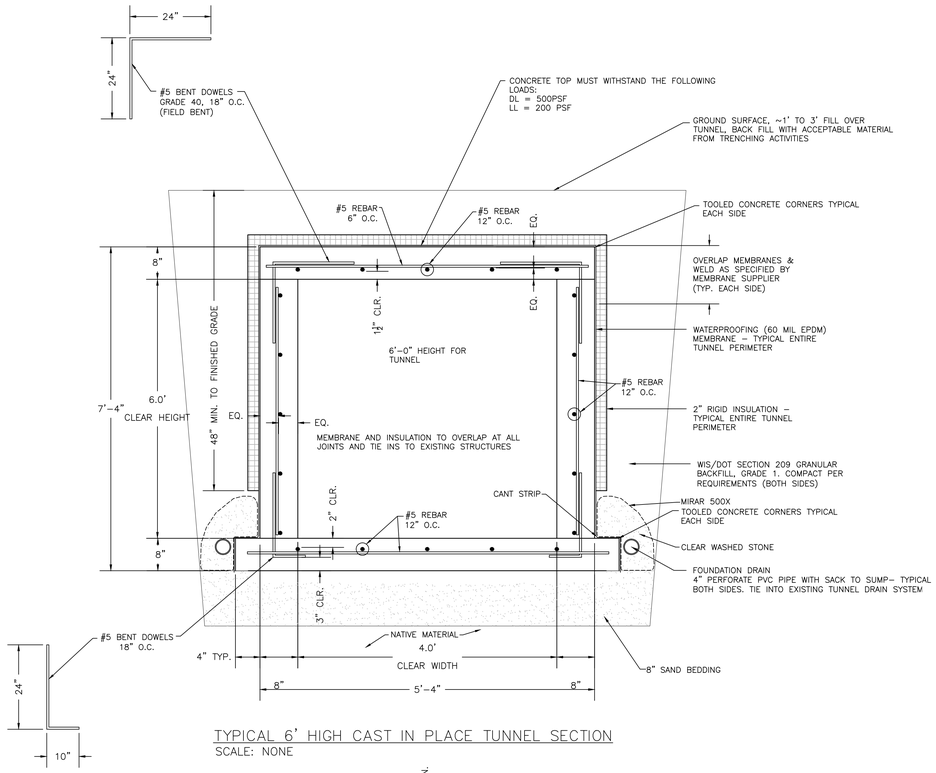
PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
CBE 3002-3012
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025
MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

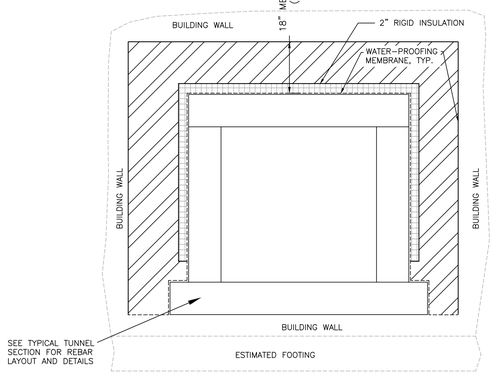
Drawing Title	STEAM TUNNEL WEST PLAN AND PROFILE
Approved: Project Director	
Project Title	Provide Fisher House Infrastructure
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	DJC
Drawn By:	NLB
Project Number	695-13-118
Building Number	-
Drawing Number	C106.1

Office of Facilities Management
Department of Veterans Affairs

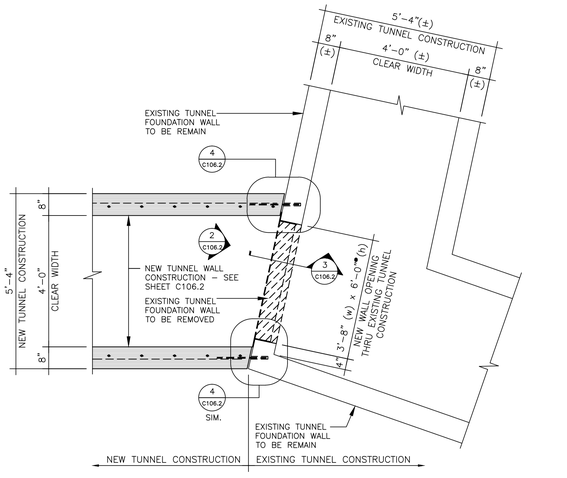
VA FORM 08–6231, OCT 1978



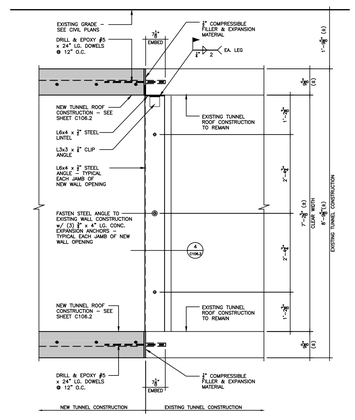
TYPICAL 6' HIGH CAST IN PLACE TUNNEL SECTION
SCALE: NONE



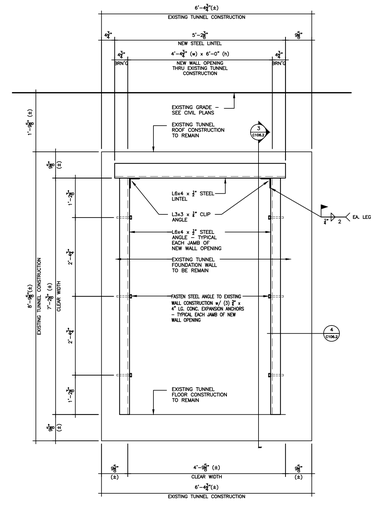
NEW TUNNEL CONNECTION AT BUILDING 102 WALL
SCALE: NONE



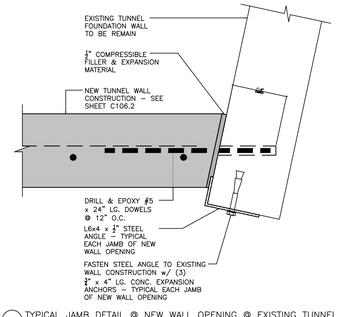
1 NEW TUNNEL CONNECTION PLAN @ EXISTING TUNNEL CONSTRUCTION
SCALE: NONE



3 NEW–TO–EXISTING TUNNEL SECTION
SCALE: NONE



2 INTERIOR TUNNEL ELEVATION @ EXISTING TUNNEL CONSTRUCTION
SCALE: NONE



4 TYPICAL JAMB DETAIL @ NEW WALL OPENING @ EXISTING TUNNEL
SCALE: NONE

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302–9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246–0220

FINAL CONSTRUCTION DOCUMENTS

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates
Landscape Architects
Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
© CBE 2002-2013

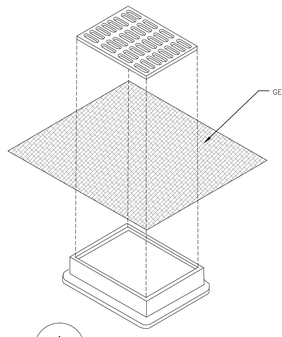
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025

MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

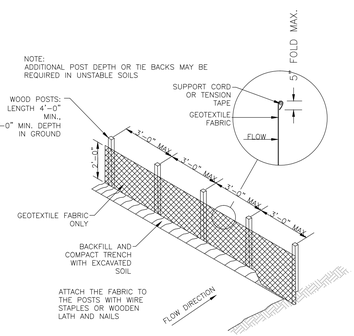
Drawing Title	STEAM TUNNEL DETAILS
Approved: Project Director	
Project Title	Provide Fisher House Infrastructure
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	DJC
Drawn By:	NLB
Project Number	695-13-118
Building Number	-
Drawing Number	C106.2

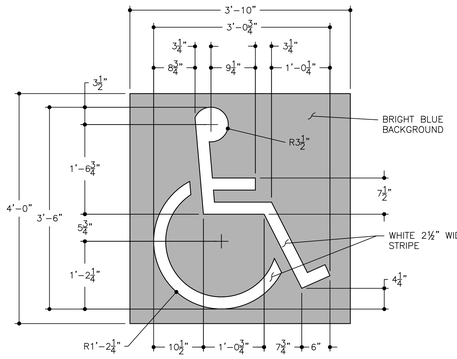
Office of Facilities Management
Department of Veterans Affairs

VA FORM 08–6231, OCT 1978

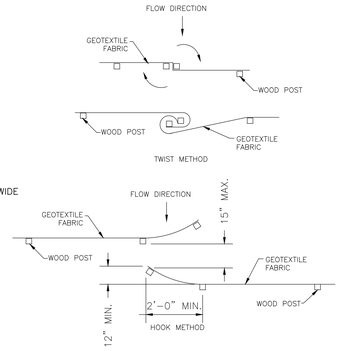


A C107 INLET PROTECTION (WITHOUT CURB BOX)
CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX

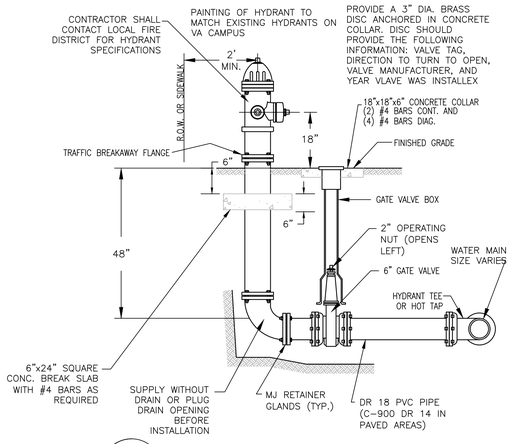




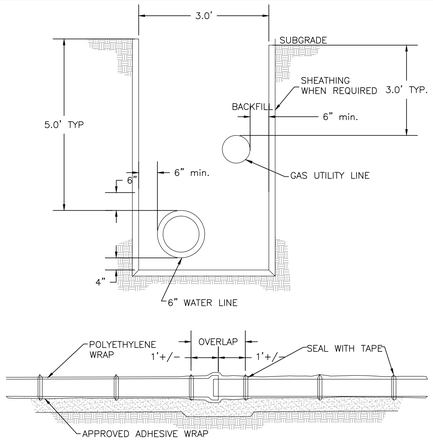
C C107 INTERNATIONAL HANDICAP SYMBOL
SCALE: NONE



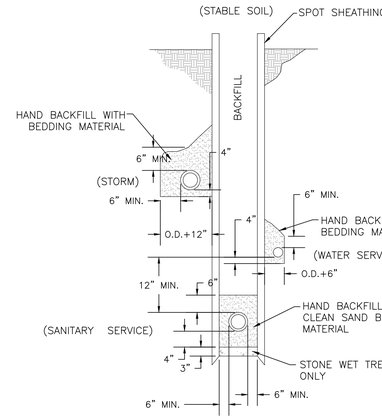
B C107 SILT FENCE INSTALLATION



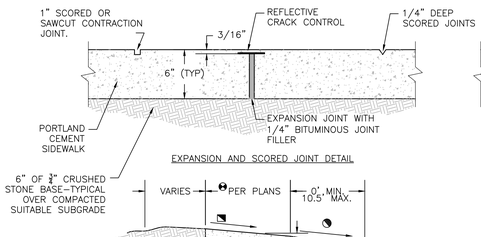
E C107 TYPICAL HYDRANT DETAIL
SCALE: NONE



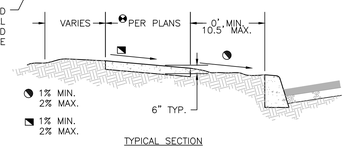
STANDARD WATER MAIN/NATURAL GAS TRENCH SECTION



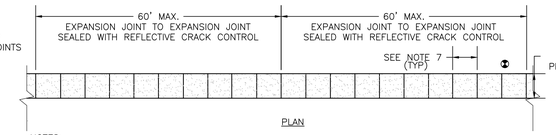
STANDARD SECTION FOR BUILDING SEWER AND WATER SERVICES



EXPANSION AND SCORED JOINT DETAIL



TYPICAL SECTION



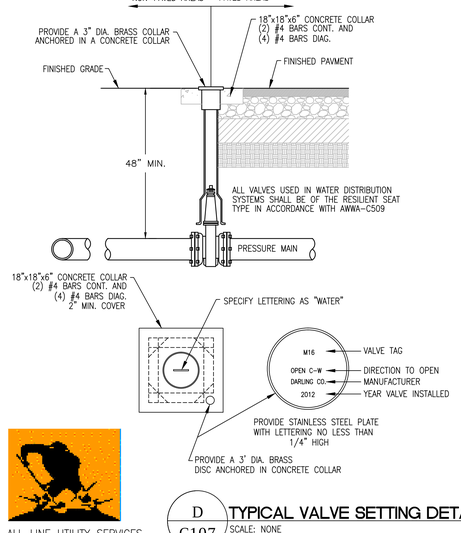
PLAN

NOTES:
1. EXPANSION JOINTS SHALL BE LOCATED WHERE SIDEWALK ABUTS CONCRETE DRIVEWAYS, CURB OR OTHER ADJACENT STRUCTURES.
2. ONE–HALF INCH BITUMINOUS JOINT FILLER SHALL BE INSTALLED AT EXPANSION JOINT LOCATIONS AND SHALL EXTEND THE FULL DEPTH OF THE CONCRETE
3. REFLECTIVE CRACK CONTROL PLACED OVER TOP OF EXPANSION JOINT PRIOR TO CONCRETE FINISH.
4. 1" DEEP CONTRACTION JOINTS SHALL BE PLACED AT INTERVALS OF APPROXIMATELY 15' OR AT A SPACING THAT MATCHES THE ADJACENT CURB.
5. FORMED CONTRACTION JOINTS SHALL BE FINISHED WITH A TOOL HAVING A 1/4" RADIUS.
6. SCORED JOINTS SHALL BE 1/4" DEEP AND PLACED AT THE SPACING INDICATED FOR THE WIDTH OF SIDEWALK OR MATCH SCORED JOINTS OF ADJACENT CURB.
7. CONCRETE SHALL BE FINISHED BY MEANS OF A FLOAT, STEEL TROWELLED AND BROOMED WITH A FINE BRUSH IN A TRANSVERSE DIRECTION.
8. 1/4" DEEP SCORED JOINTS (TYP) SPACED AT 6' OR EQUAL TO SIDEWALK WIDTH.
9. CONCRETE TO BE 6" PORTLAND CEMENT SIDEWALK WITH 4" CRUSHED STONE BASE

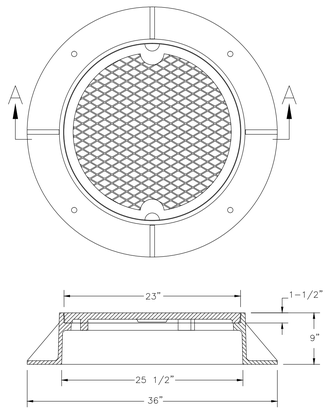
F C107 CONCRETE SIDEWALK
SCALE: NONE

NOTE:
1. SEE SITE AND ENGINEERING DESIGN MANUAL FOR PARKING BAY WIDTHS.
2. SEE VA BARRIER FREE DESIGN HANDBOOK H–08–13 FOR ACCESSIBLE SPACE QUANTITIES AND SIGNAGE.
3. ACCESSIBLE SPACE FOR VANS MUST BE 11' WIDE WITH 5' ACCESS AISLES AND BE DESIGNATED FOR VANS ONLY.

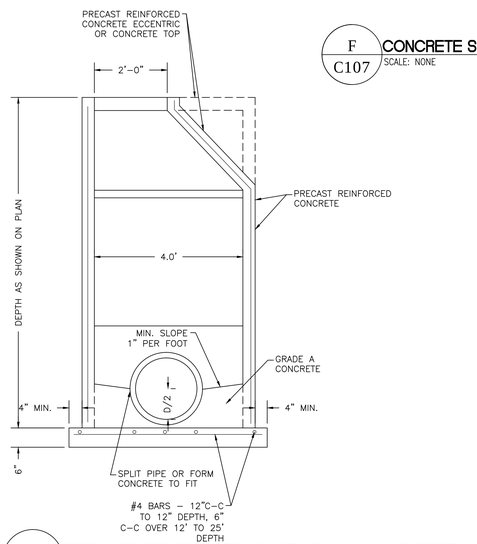
G C107 PARKING STALL LAYOUT
SCALE: NONE



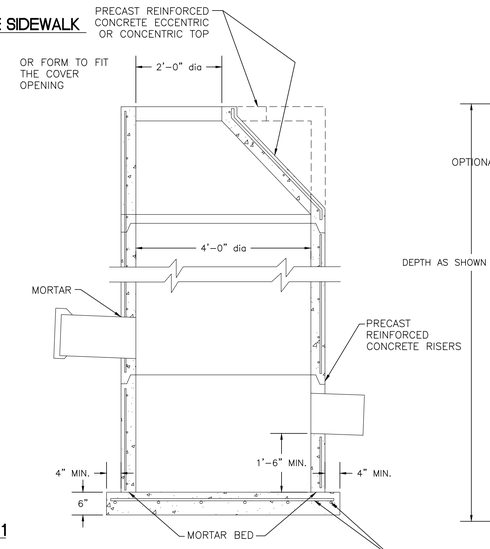
D C107 TYPICAL VALVE SETTING DETAIL
SCALE: NONE



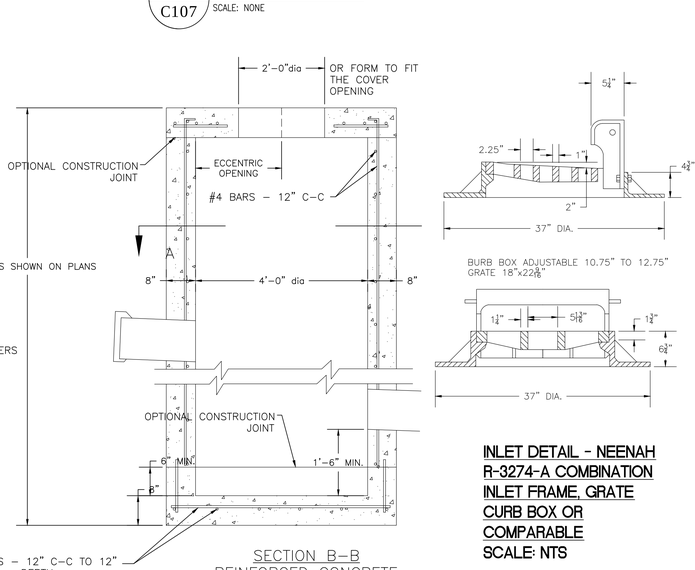
R1540 SANITARY MANHOLE COVER
SCALE: NTS



S C107 PRECAST REINFORCED SANITARY MANHOLE TYPE 1
SCALE: NTS



PRECAST REINFORCED CONCRETE



SECTION B–B
REINFORCED CONCRETE

INLET DETAIL – NEENAH R–3274–A COMBINATION INLET FRAME, GRATE CURB BOX OR COMPARABLE
SCALE: NTS

H C107 CATCH BASINS, TYPE 1
SCALE: NONE

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302–9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246–0220

FINAL CONSTRUCTION DOCUMENTS

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates — Landscape Architects
Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

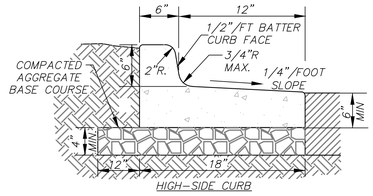
PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
© CBE 2002-2012
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI, 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025
MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 109
MILWAUKEE, WI, 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

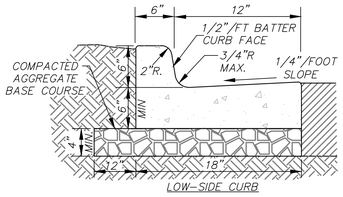
Drawing Title	DETAILS
Approved: Project Director	
Project Title	Provide Fisher House Infrastructure
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	DJC
Drawn By:	NLB
Project Number	695-13-118
Building Number	-
Drawing Number	C107

Office of Facilities Management
Department of Veterans Affairs

VA FORM 08–6231, OCT 1978



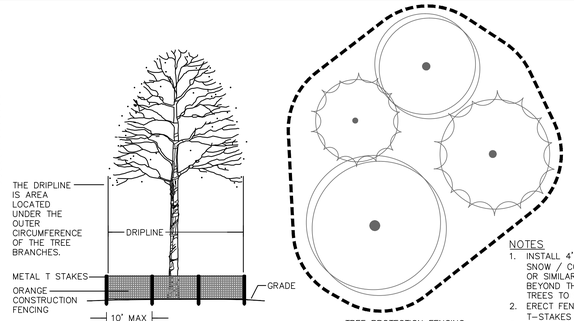
HIGH-SIDE CURB



LOW-SIDE CURB

NOTES:
A) 3500 PSI CONCRETE SHALL BE USED IN CONSTRUCTION OF THE CURB & GUTTER.
B) THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE SLOPE OF THE GUTTER PAN.
C) FOR DEPRESSED CURB HEAD SLOPE, USE THE SAME SLOPE AS ADJACENT SIDEWALK.
D) THE BOTTOM OF THE CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDE MINIMUM 6" GUTTER THICKNESS MAINTAINED. TRANSVERSE CONTRACTION JOINTS SHALL BE CUT OR SAWED AT MAXIMUM 20 FOOT INTERVALS.
E) 1/2" PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED TRANSVERSELY IN THE CURB ABUTTING EXISTING CURB AND SIDEWALK, WALLS OR BUILDINGS, AND AT INTERVALS NOT TO EXCEED 300 FEET, WITH PREFERRED LOCATIONS BEING AT RADIUS POINTS OR ANGLE POINTS.

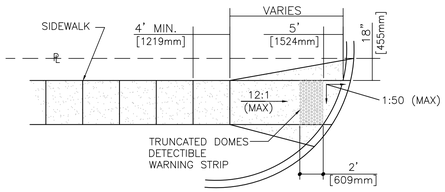
K / C107.1 **CONCRETE CURB AND GUTTER DETAIL**
SCALE: NONE

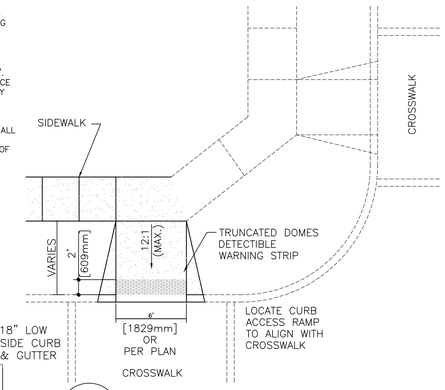


NOTE: TO THE GREATEST EXTENT POSSIBLE, CONTRACTORS SHALL BE RESPONSIBLE FOR EXERCISING GREAT CARE TO RETAIN AND PROTECT ALL EXISTING TREES.

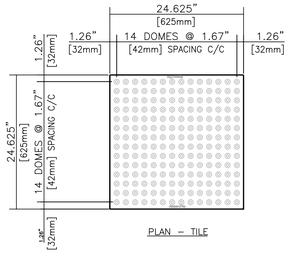
NOTES:
1. INSTALL 4' HIGH ORANGE VINYL SNOW / CONSTRUCTION FENCING OR SIMILAR FENCING AT OR BEYOND THE DRIPLINE OF ALL TREES TO SAVE.
2. ERECT FENCE WITH 5' METAL T-STAKES AT LEAST EVERY 10'.
3. THE FENCING SHALL BE IN PLACE BEFORE CONSTRUCTION ACTIVITY BEGINS AND REMAIN UNTIL ALL EXTERIOR WORK HAS BEEN COMPLETED.
4. NO CONSTRUCTION ACTIVITY SHALL TAKE PLACE NOR SHALL ANY EQUIPMENT BE STORED INSIDE OF THE FENCING.

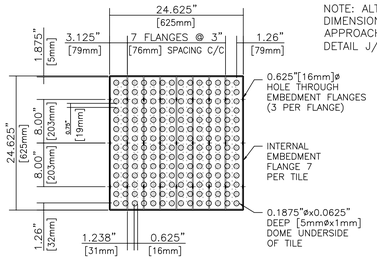
N / C107.1 **TREE PROTECTION FENCING DETAIL**
SCALE: NONE





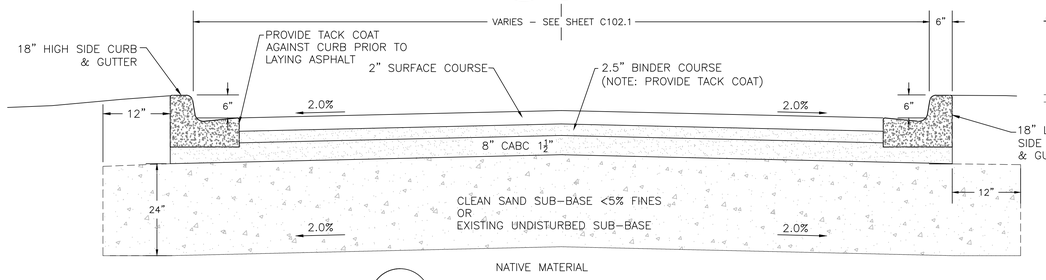
J / C107.1 **CURB ACCESS RAMP**
SCALE: NONE





NOTE: ALTER WARNING STRIP DIMENSIONS TO MATCH SIDEWALK APPROACH LENGTHS AS SHOWN ON DETAIL J/C107.1

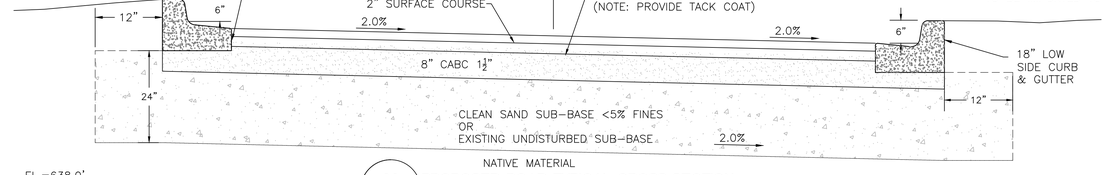
DETECTABLE WARNING DETAIL
SCALE NTS



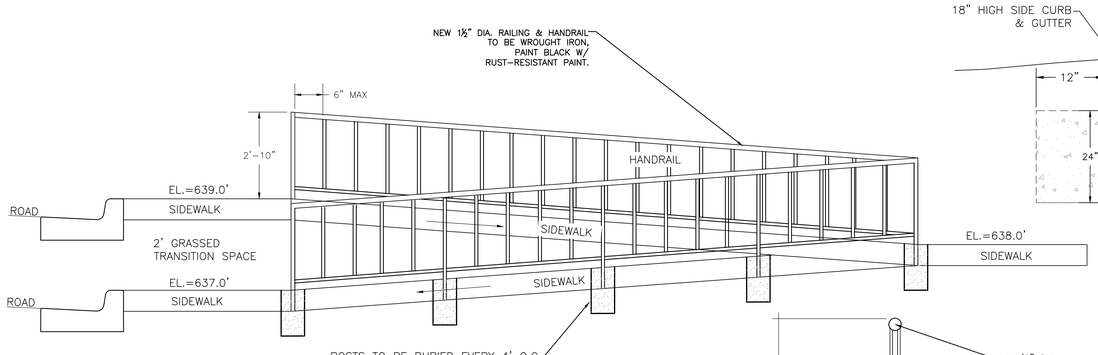
L / C107.1 **PROPOSED ROAD TYPICAL CROSS SECTION**
SCALE NTS

NOTE:
CONTRACTOR MAY RE-USE EXISTING ROAD SUB-BASE IF MAXIMUM SIZE OF MATERIAL (AGGREGATE) IS 1½" AND IT IS "CLEAN" <5% FINES.

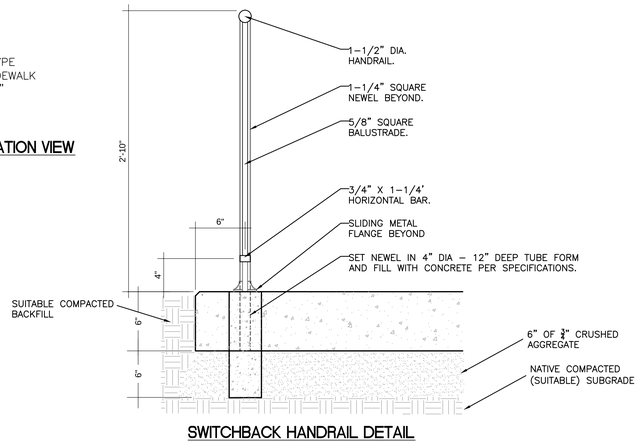
IF MATERIAL DOES NOT MEET SPECIFICATION SECTION 32 12 16 SUB-BASE WILL NEED TO BE IMPORTED TO SITE.



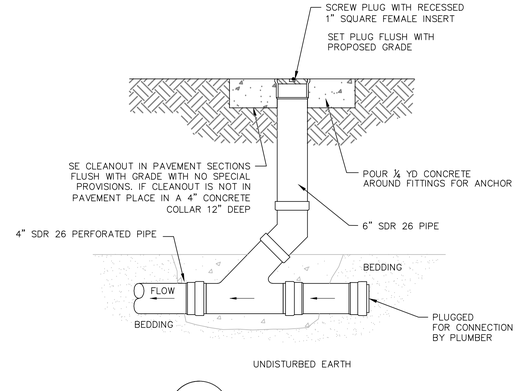
M / C107.1 **PROPOSED ROAD TYPICAL CROSS SECTION**
SCALE NTS



P / C107.1 **SWITCHBACK ELEVATION VIEW**
SCALE NTS



SWITCHBACK HANDRAIL DETAIL
SCALE NTS



Q / C107.1 **GRADE CLEANOUT DETAIL**
SCALE NTS

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302-9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246-0220

FINAL CONSTRUCTION DOCUMENTS

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates — Landscape Architects
Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

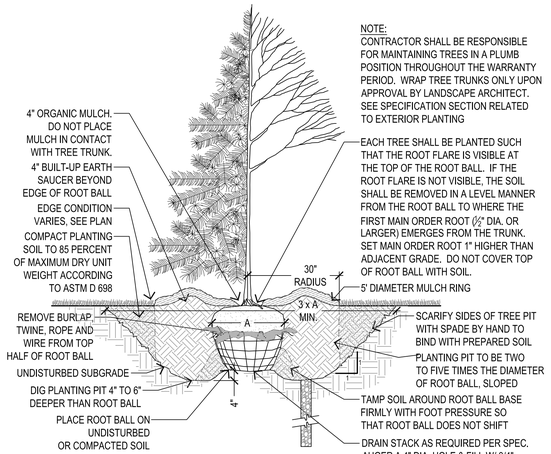
PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
© CBE 2002-2012
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025
MILWAUKEE, WI
933 N. MAYFAIR RD.,
SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

Drawing Title	DETAILS
Approved: Project Director	
Project Title	Provide Fisher House Infrastructure
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	DJC
Drawn By:	NLB
Project Number	695-13-118
Building Number	-
Drawing Number	C107.1

Office of Facilities Management
Department of Veterans Affairs

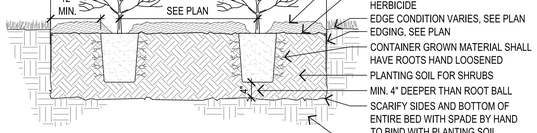
VA FORM 08-6231, OCT 1978



NOTE:
CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TREES IN A PLUMB POSITION THROUGHOUT THE WARRANTY PERIOD. WRAP TREE TRUNKS ONLY UPON APPROVAL BY LANDSCAPE ARCHITECT. SEE SPECIFICATION SECTION RELATED TO EXTERIOR PLANTING

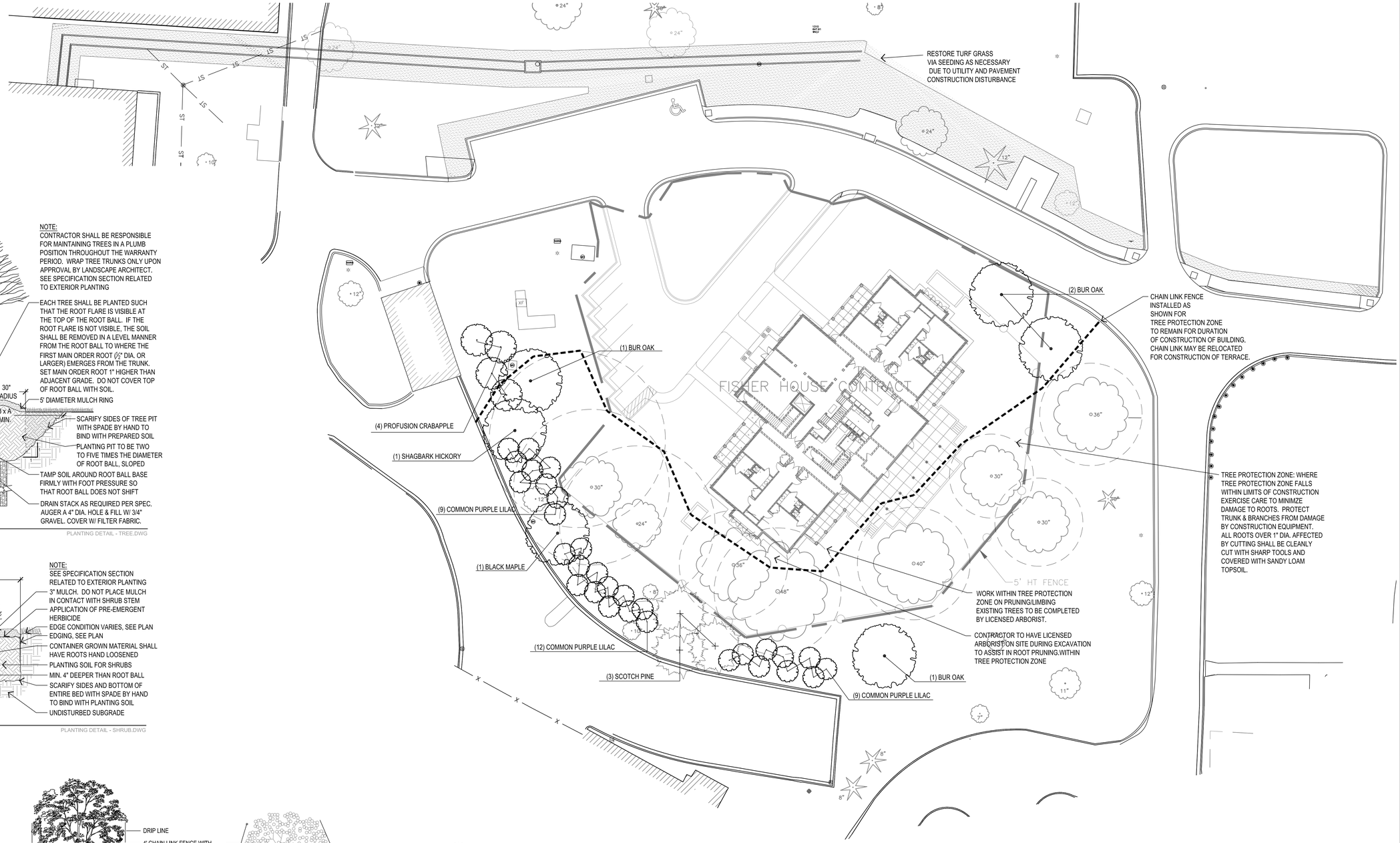
EACH TREE SHALL BE PLANTED SUCH THAT THE ROOT FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. IF THE ROOT FLARE IS NOT VISIBLE, THE SOIL SHALL BE REMOVED IN A LEVEL MANNER FROM THE ROOT BALL TO WHERE THE FIRST MAIN ORDER ROOT (½" DIA. OR LARGER) EMERGES FROM THE TRUNK. SET MAIN ORDER ROOT 1" HIGHER THAN ADJACENT GRADE. DO NOT COVER TOP OF ROOT BALL WITH SOIL.

1 L100 **TREE PLANTING DETAIL**
SCALE: 1/2" = 1'-0" — PLANTING DETAIL - TREE.DWG



NOTE:
SEE SPECIFICATION SECTION RELATED TO EXTERIOR PLANTING
3" MULCH. DO NOT PLACE MULCH IN CONTACT WITH SHRUB STEM
APPLICATION OF PRE-EMERGENT HERBICIDE
EDGE CONDITION VARIES, SEE PLAN
EDGING, SEE PLAN
CONTAINER GROWN MATERIAL SHALL HAVE ROOTS HAND LOOSENED
PLANTING SOIL FOR SHRUBS
MIN. 4" DEEPER THAN ROOT BALL
SCARIFY SIDES AND BOTTOM OF ENTIRE BED WITH SPADE BY HAND TO BIND WITH PLANTING SOIL
UNDISTURBED SUBGRADE

2 L100 **SHRUB PLANTING DETAIL**
SCALE: 3/4" = 1'-0" — PLANTING DETAIL - SHRUB.DWG



4 L100 **SITE LANDSCAPE PLAN AND TREE PROTECTION PLAN**
SCALE: 1"=20'

NOTE: TREE PROTECTION SHALL BE PROVIDED BY CONTRACTOR AS REQUIRED TO ENSURE SURVIVABILITY OF EXISTING TREES TO REMAIN. NO HEAVY EQUIPMENT SHALL BE STORED WITHIN THE TREE DRIP LINE AS DESIGNATED ABOVE.

3 L100 **TREE PROTECTION**
SCALE: 1/8" = 1'-0" — TREE PROTECTION2.DWG

NOTES:
1. Landscape Contractor to Install Tree protection as shown on this plan. Once installed, Fisher House Contractor may alter the layout based on Construction Activities under the direct supervision of VA COR and Landscape Architect (within this contract).
2. All plant materials to be field staked and approved by landscape architect prior to installation.
3. In the case of conflicts or discrepancies within or among the Contract Drawings, the better quality, more stringent requirements or greater quantity of work, as determined by the Government, shall be provided.

PLANTING SCHEDULE

Qty	Botanical Name	Common Name	Size	Container
	TREES			
1	Acer nigrum	Black Maple	2.5"	B&B
1	Carya ovata	Shagbark Hickory	2.5"	B&B
4	Malus 'profusion'	Profusion Crabapple	2.5"	B&B
3	Pinus sylvestris	Scotch Pine	2.5"	B&B
4	Quercus macrocarpa	Bur Oak	2.5"	B&B
	SHRUBS			
21	Syringa Vulgaris	Common Purple Lilac	#7	pot

0 10 20 40
SCALE: 1" = 20'-0" NORTH

FINAL CONSTRUCTION DOCUMENTS

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302-9750

Private Lines Inc.
AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246-0220

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates — Landscape Architects
Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

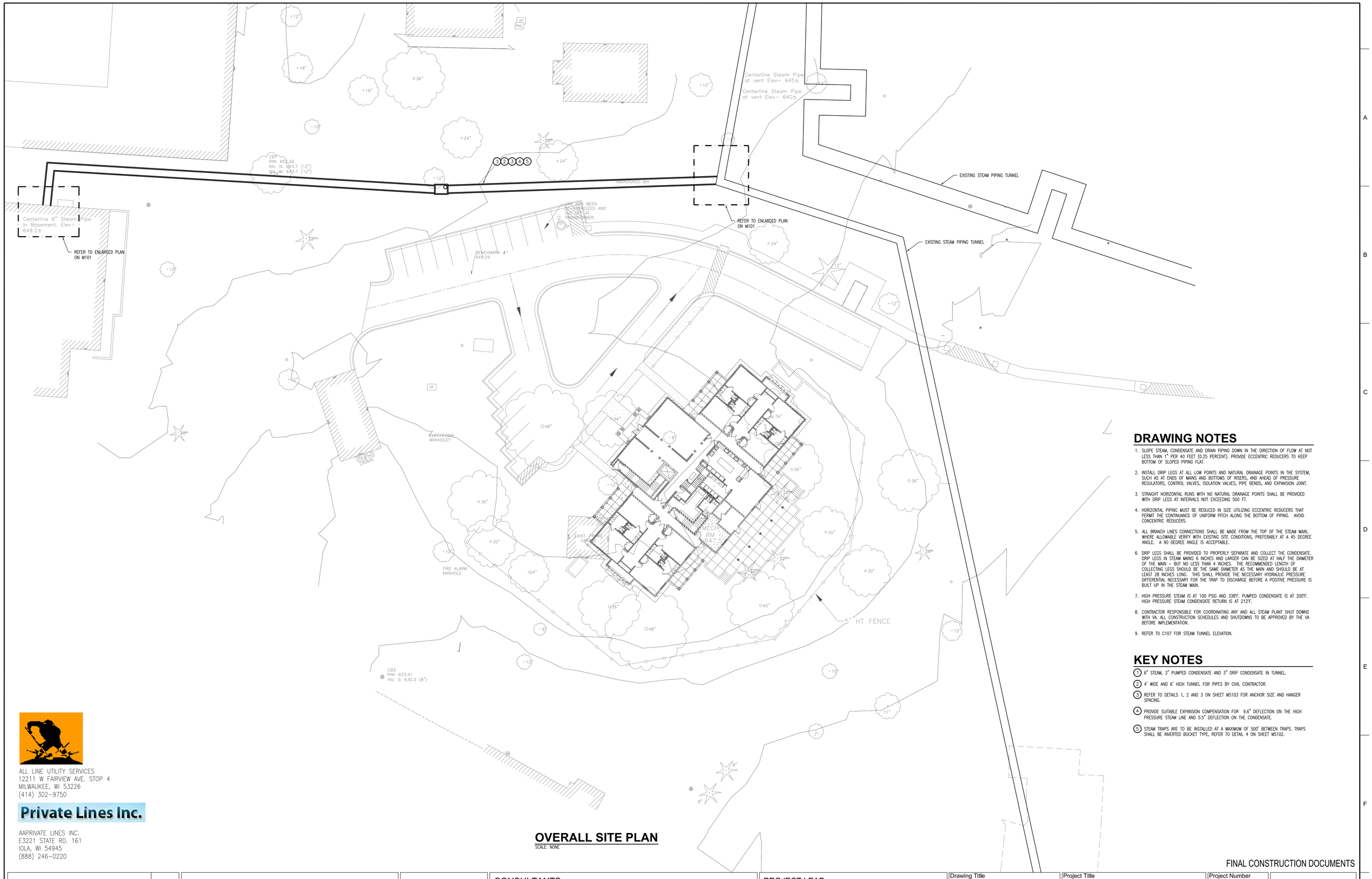
PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025
MILWAUKEE, WI
933 N. MAYFAIR RD.,
SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

Drawing Title	LANDSCAPE PLAN
Approved: Project Director	
Project Title	Provide Fisher House Infrastructure
Location	VA Medical Center,Milwaukee, WI
Date	19 April 2013
Checked By:	JG
Drawn By:	JG
Project Number	695-13-118
Building Number	-
Drawing Number	L100

Office of Facilities Management
Department of Veterans Affairs

VA FORM 08-6231, OCT 1978



DRAWING NOTES

1. SLOPE STEAM, CONDENSATE AND DRAIN PIPING DOWN IN THE DIRECTION OF FLOW AT NOT LESS THAN 1" PER 40 FEET (0.25 PERCENT). PROVIDE ECCENTRIC REDUCERS TO KEEP BOTTOM OF SLOPED PIPING FLAT.
2. INSTALL DRIP LEGS AT ALL LOW POINTS AND NATURAL DRAINAGE POINTS IN THE SYSTEM, SUCH AS AT ENDS OF MAINS AND BOTTOMS OF RISERS, AND AHEAD OF PRESSURE REGULATORS, CONTROL VALVES, ISOLATION VALVES, PIPE BENDS, AND EXPANSION JOINT.
3. STRAIGHT HORIZONTAL RUNS WITH NO NATURAL DRAINAGE POINTS SHALL BE PROVIDED WITH DRIP LEGS AT INTERVALS NOT EXCEEDING 500 FT.
4. HORIZONTAL PIPING MUST BE REDUCED IN SIZE UTILIZING ECCENTRIC REDUCERS THAT PERMIT THE CONTINUANCE OF UNIFORM PITCH ALONG THE BOTTOM OF PIPING. AVOID CONCENTRIC REDUCERS.
5. ALL BRANCH LINES CONNECTIONS SHALL BE MADE FROM THE TOP OF THE STEAM MAIN, WHERE ALLOWABLE VERIFY WITH EXISTING SITE CONDITIONS, PREFERABLY AT A 45 DEGREE ANGLE. A 90 DEGREE ANGLE IS ACCEPTABLE.
6. DRIP LEGS SHALL BE PROVIDED TO PROPERLY SEPARATE AND COLLECT THE CONDENSATE. DRIP LEGS IN STEAM MAINS 6 INCHES AND LARGER CAN BE SIZED AT HALF THE DIAMETER OF THE MAIN – BUT NO LESS THAN 4 INCHES. THE RECOMMENDED LENGTH OF COLLECTING LEGS SHOULD BE THE SAME DIAMETER AS THE MAIN AND SHOULD BE AT LEAST 28 INCHES LONG. THIS SHALL PROVIDE THE NECESSARY HYDRAULIC PRESSURE DIFFERENTIAL NECESSARY FOR THE TRAP TO DISCHARGE BEFORE A POSITIVE PRESSURE IS BUILT UP IN THE STEAM MAIN.
7. HIGH PRESSURE STEAM IS AT 100 PSIG AND 338°F. PUMPED CONDENSATE IS AT 200°F. HIGH PRESSURE STEAM CONDENSATE RETURN IS AT 212°F.
8. CONTRACTOR RESPONSIBLE FOR COORDINATING ANY AND ALL STEAM PLANT SHUT DOWNS WITH VA. ALL CONSTRUCTION SCHEDULES AND SHUTDOWNS TO BE APPROVED BY THE VA BEFORE IMPLEMENTATION.
9. REFER TO C107 FOR STEAM TUNNEL ELEVATION.

KEY NOTES

1. 6" STEAM, 3" PUMPED CONDENSATE AND 3" DRIP CONDENSATE IN TUNNEL.
2. 4' WIDE AND 6' HIGH TUNNEL FOR PIPES BY CIVIL CONTRACTOR.
3. REFER TO DETAILS 1, 2 AND 3 ON SHEET MS103 FOR ANCHOR SIZE AND HANGER SPACING.
4. PROVIDE SUITABLE EXPANSION COMPENSATION FOR 9.6" DEFLECTION ON THE HIGH PRESSURE STEAM LINE AND 5.5" DEFLECTION ON THE CONDENSATE.
5. STEAM TRAPS ARE TO BE INSTALLED AT A MAXIMUM OF 500' BETWEEN TRAPS. TRAPS SHALL BE INVERTED BUCKET TYPE, REFER TO DETAIL 4 ON SHEET MS102.

OVERALL SITE PLAN

SCALE: NONE

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302-9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246-0220

FINAL CONSTRUCTION DOCUMENTS

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

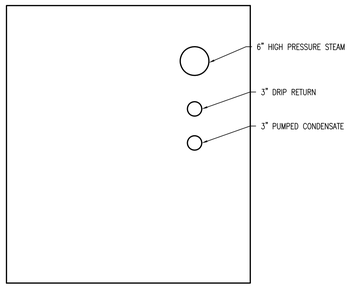
Damon Farber Associates — Landscape Architects
Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

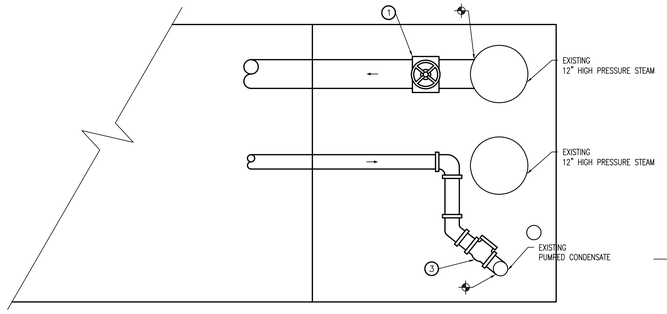
CHEQUAMEGON BAY ENGINEERING, INC. © CBE 2003-2012
ASHLAND, WI
311 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025
MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 100
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

Drawing Title: **OVERALL MECHANICAL SITE PLAN**	Project Title: Provide Fisher House Infrastructure	Project Number: 695-13-118	Office of Facilities Management
		Building Number: -	
Approved: Project Director	Location: VA Medical Center,Milwaukee, WI	Drawing Number: **MS100**	Department of Veterans Affairs
	Date: 22 April 2013 / Checked By: RGE / Drawn By: JJP		

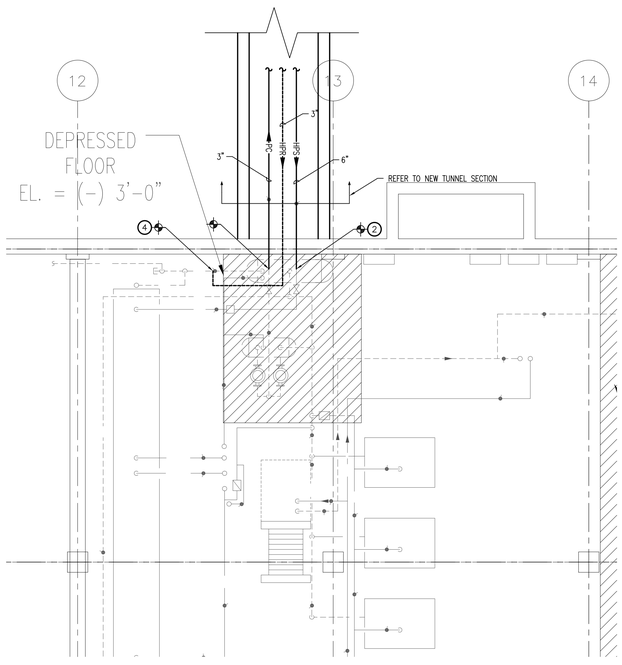
VA FORM 08-6231, OCT 1978



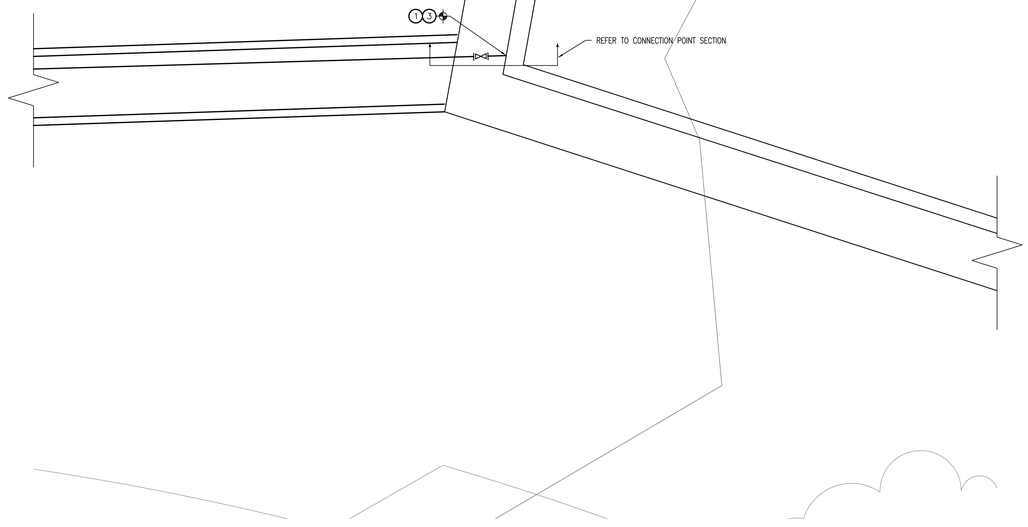
NEW TUNNEL SECTION
SCALE: NONE



CONNECTION POINT SECTION
SCALE: NONE



BUILDING 102
SCALE: 1/4" = 1'-0"



CONNECTION POINT
SCALE: 1/4" = 1'-0"

KEY NOTES

1. PROVIDE ISOLATION VALVE AT BRANCH CONNECTION.
2. PROVIDE DRIP TRAP AT THE END OF STEAM LINE IF ONE IS NOT ALREADY THERE. FIELD VERIFY WITH EXISTING CONDITIONS. REFER TO DETAIL 5 ON SHEET MS102.
3. PROVIDE CHECK VALVE IN PUMPED CONDENSATE BRANCH.
4. CONNECT NEW 3" HIGH PRESSURE STEAM DRIP CONDENSATE TO EXISTING 3" HPR DRIP CONDENSATE PRIOR TO FLASH TANK.

PIPING SYMBOLS

- HPS — HIGH PRESSURE STEAM (60 PSIG AND ABOVE)
- HPR — HIGH PRESSURE STEAM CONDENSATE RETURN
- PC — CONDENSATE PUMP DISCHARGE

VALVE SYMBOLS

- GATE VALVE – THREADED/FLANGED
- CHECK VALVE

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302-9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246-0220

FINAL CONSTRUCTION DOCUMENTS

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates
Landscape Architects
Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

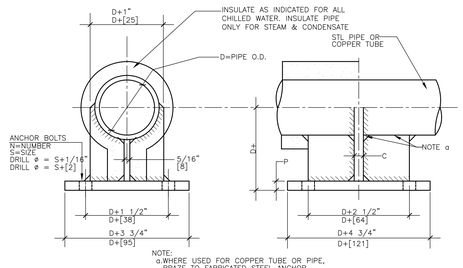
CHEQUAMEGON BAY ENGINEERING, INC.
© CBE 2003-2012
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025
MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

Drawing Title	**ENLARGED MECHANICAL PLANS**
Approved: Project Director	
Project Title	Provide Fisher House Infrastructure
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	RGE
Drawn By:	JJP
Project Number	695-13-118
Building Number	-
Drawing Number	**MS101**

Office of Facilities Management
Department of Veterans Affairs

VA FORM 08-6231, OCT 1978

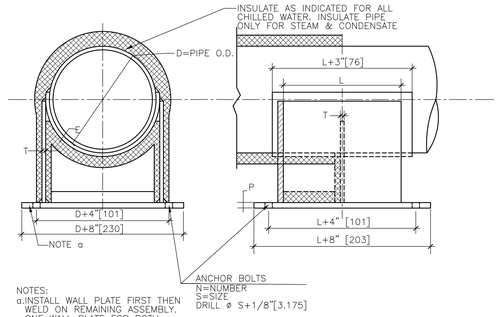
PIPE ANCHOR SCHEDULE												
D		P		C		N		S		BOLT PATTERN
IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	
4"	102	$\frac{5}{8}$"	16	$\frac{7}{4}$"	19	4"	102	$\frac{3}{4}$"	19	
3"	76	$\frac{1}{2}$"	13	$\frac{3}{4}$"	13	4"	102	$\frac{5}{8}$"	16	
$2\frac{1}{2}$"	64	$\frac{5}{8}$"	10	$\frac{7}{4}$"	10	4"	102	$\frac{5}{8}$"	16	
2"	51	$\frac{5}{8}$"	10	$\frac{7}{4}$"	10	4"	102	$\frac{5}{8}$"	16	
$1\frac{1}{2}$"	38	$\frac{5}{8}$"	10	$\frac{3}{4}$"	6	4"	102	$\frac{1}{2}$"	13	



1 SMALL PIPE ANCHOR $1\frac{1}{2}$"- 4"

NTS

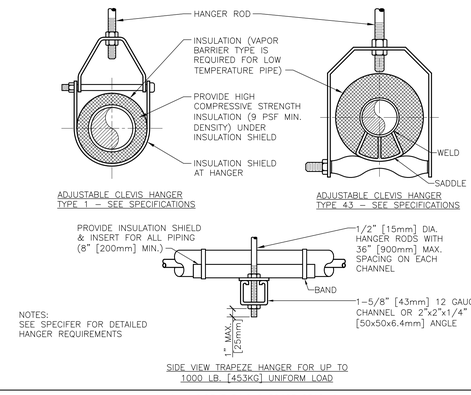
PIPE ANCHOR SCHEDULE																
D		L		P		T		F		N		S		BOLT PATTERN
IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	
6"	152	$8\frac{1}{2}$"	216	$\frac{3}{4}$"	19	$\frac{5}{8}$"	10	$\frac{1}{4}$"	6	4"	102	$\frac{7}{8}$"	22	
8"	203	10"	254	$\frac{3}{4}$"	19	$\frac{1}{2}$"	13	$\frac{1}{4}$"	6	4"	102	$\frac{7}{8}$"	22	
10"	254	12"	305	$\frac{3}{4}$"	19	$\frac{1}{2}$"	13	$\frac{1}{4}$"	6	4"	102	$\frac{7}{8}$"	22	
12"	305	14"	356	$\frac{3}{4}$"	19	$\frac{1}{2}$"	13	$\frac{1}{2}$"	6	4"	102	$\frac{7}{8}$"	22	
14"	356	16"	406	$\frac{3}{4}$"	19	$\frac{1}{2}$"	13	$\frac{1}{2}$"	13	4"	102	$\frac{7}{8}$"	22	
16"	406	18"	457	$\frac{3}{4}$"	19	$\frac{1}{2}$"	13	$\frac{1}{2}$"	13	4"	102	$\frac{7}{8}$"	22	
18"	457	20"	508	1"	25	$\frac{5}{8}$"	16	$\frac{1}{2}$"	13	6"	152	1"	25	



NOTES:
a.INSTALL WALL PLATE FIRST THEN WELD ON REMAINING ASSEMBLY. ONE WALL PLATE FOR BOTH CHILLED WATER S.&R. IS OPTIONAL.

2 LARGE PIPE ANCHOR 6" -18"

NTS



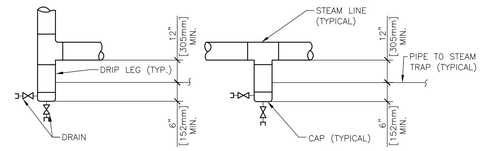
NOTES:
SEE SPECIFER FOR DETAILED HANGER REQUIREMENTS

SIDE VIEW TRAPEZE HANGER FOR UP TO 1000 LB. [455KG] UNIFORM LOAD

MAXIMUM PIPE/TUBING SUPPORT SPACING																				
NOM. SIZE	IN. [mm]	THRU 3/4 THRU [20]	1 [25]	1 1/4 [32]	1 1/2 [40]	2 [50]	2 1/2 [65]	3 [75]	4 [100]	5 [125]	6 [150]	8 [200]	10 [250]	12 [300]	14 [350]	16 [400]	18 [450]	20 [500]	24 [600]
PIPE	FT. [mm]	7 [2100]	9 [2100]	9 [2100]	9 [2700]	10 [3000]	11 [3400]	12 [3700]	14 [4100]	16 [4900]	17 [5200]	19 [5800]	22 [6700]	23 [7000]	25 [7600]	27 [8200]	28 [8500]	30 [9100]	32 [9600]
TUBING	FT. [mm]	5 FT [1500]	6 [1800]	7 [2100]	8 [2400]	8 [2400]	9 [2700]	10 [3000]	12 [3700]	13 [4000]	14 [4100]	16 [4900]	–	–	–	–	–	–	–	–
NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.																				

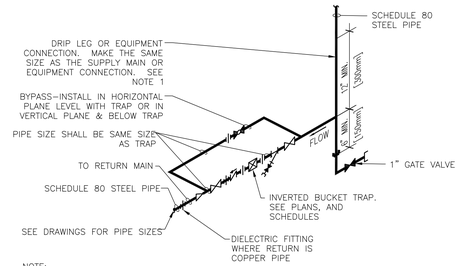
3 PIPE HANGERS

NTS



STEAM LINE DRIP POCKET

NOTE:
DRIP POCKET PIPE SIZE SAME AS STEAM MAIN UNLESS OTHERWISE NOTED.



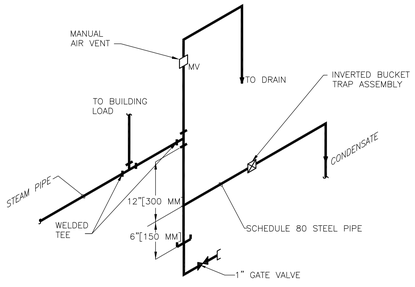
NOTE:

1. ALL DRIP POINTS ON STEAM MAINS SHALL BE PROVIDED WITH A 12" MINIMUM HIGH DRIP LEG FROM BOTTOM OF STEAM MAIN TO TRAP INLET. DRIP LEG SHALL HAVE 6" SCALE POCKET BELOW TRAP INLET.
2. PROVIDE BYPASS PIPING.

STEAM TRAP ASSEMBLY

4 INVERTED BUCKET STEAM TRAP ASSEMBLY

NTS



5 END OF STEAM LINE DRIP TRAP

NTS

GENERAL REQUIREMENTS

NOTHING CONTAINED IN THESE NOTES OR SHOWN ON THE DRAWINGS SHALL BE SO CONSTRUED AS TO CONFLICT WITH ANY LOCAL, MUNICIPAL, OR STATE LAWS, REGULATIONS OR CODES GOVERNING THE INSTALLATION OF PIPING, OR ANY OTHER WORK SPECIFIED, AND ALL SUCH LAWS, ORDINANCES AND REGULATIONS ARE HEREBY INCORPORATED AND MADE PART OF THESE SPECIFICATIONS. THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER SHALL SATISFY ALL SUCH REQUIREMENTS.

THE DRAWINGS ARE INTENDED TO DIAGRAMMATIC AND ARE BASED GENERALLY ON THE MANUFACTURER'S EQUIPMENT SPECIFIED. DUE TO THE SMALL SCALE OF THE DRAWINGS IT IS NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION, THE EXACT DIMENSIONS, OR ALL THE DETAILS OF THE EQUIPMENT. THE CONTRACTOR SHALL VERIFY THE ACTUAL DIMENSIONS OF THE PROPOSED EQUIPMENT (INCLUDING VALVES AND TRAPS) TO INSURE THAT EQUIPMENT WILL FIT INTO THE AVAILABLE SPACE.

INSTALLATION SHALL BE WITHIN THE LIMITATIONS IMPOSED BY THE ARCHITECTURAL, STRUCTURAL, HVAC, PLUMBING, AND ELECTRICAL REQUIREMENTS, WITH ADEQUATE SPACE FOR MAINTENANCE. INSTALL WORK TO ACCOMMODATE OWNER'S OCCUPANCY REQUIREMENTS. DURING THE CONSTRUCTION PERIOD, COORDINATE SCHEDULE AND OPERATIONS WITH OWNER.

ALL EQUIPMENT SHALL BE INSTALLED IN SUCH A WAY THAT ALL COMPONENTS REQUIRING ACCESS ARE SO LOCATED AND INSTALLED THAT THEY MAY BE SERVICED, RESET, REPLACED OR RECALIBRATED, ETC., BY SERVICE PEOPLE WITH NORMAL SERVICE TOOLS AND EQUIPMENT. IF ANY EQUIPMENT OR COMPONENTS ARE SHOWN IN SUCH A POSITION THAT THIS CONTRACTOR OR SUBCONTRACTOR CANNOT COMPLY WITH THE ABOVE, THEN THIS CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR AND ATTEMPT TO RESOLVE THE PROBLEM OF ACCESS. IF THIS CONSULTATION IS NOT SUCCESSFUL, THE ENGINEER SHALL BE NOTIFIED IN WRITING AND A DECISION REQUESTED.

SUBMIT SHOP DRAWINGS AND PRODUCT DATA GROUPED TO INCLUDE COMPLETE SUBMITTALS OF RELATED SYSTEMS, PRODUCTS, SYSTEM SCHEMATICS, AND ACCESSORIES IN A SINGLE SUBMITTAL. MARK DIMENSIONS AND VALUES IN UNITS TO MATCH THOSE SPECIFIED. NO PIPING OR ASSOCIATED EQUIPMENT SHALL BE INSTALLED PRIOR TO APPROVAL OF SUCH EQUIPMENT BY ENGINEER.

CONFORM TO APPLICABLE STATE CODE, NFPA, BOILER CODE, AND OSHA CODES FOR ALL WORK. OBTAIN PERMITS AND REQUEST INSPECTIONS FROM THE CITY OF MILWAUKEE AND STATE OF WISCONSIN, BUILDING INSPECTOR, AND ANY OTHER AUTHORITY HAVING JURISDICTION. THE CONTRACTOR SHALL DELIVER TO THE ENGINEER/ARCHITECT ALL CERTIFICATES AND LEGAL EVIDENCE OF COMPLIANCE WITH THE ABOVE–MENTIONED LAWS, CODES, ORDINANCES AND REGULATIONS.

DRAWINGS ARE BASED ON THE BEST INFORMATION AVAILABLE AND ARE NOT GUARANTEED 100% ACCURATE. THIS CONTRACTOR MUST FIELD VERIFY CONDITIONS AND MAKE NECESSARY ADJUSTMENTS WITHOUT EXTRA COSTS TO THE PROJECT TO SUIT ACTUAL NEEDS.

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302–9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246–0220

FINAL CONSTRUCTION DOCUMENTS

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates
Landscape Architects
Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
© CBE 2003-2012
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025
MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 100
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

Drawing Title	**DETAILS**
Approved: Project Director	
Project Title	Provide Fisher House Infrastructure
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	**RGE**
Drawn By:	**JJP**
Project Number	695-13-118
Building Number	-
Drawing Number	**MS102**

Office of Facilities Management
Department of Veterans Affairs

VA FORM 08–6231, OCT 1978

ELECTRICAL AND LOW-VOLTAGE SYSTEMS ABBREVIATIONS

1PH	SINGLE–PHASE	EC	EMPTY CONDUIT	OC	ON CENTER
1P	SINGLE POLE	EG	EQUIPMENT GROUND	OD	OUTSIDE DIAMETER
2/C	TWO–CONDUCTOR	EL	ELEVATION	OL	OVERLOAD
3/C	THREE–CONDUCTOR	ELEC	ELECTRIC OR ELECTRICAL		
3PH	THREE–PHASE	ELEV	ELEVATOR	P	POLE
4/C	FOUR–CONDUCTOR	EMCP	EMERGENCY MONITORING CONTROL PANEL	PA	PUBLIC ADDRESS
4W	FOUR–WIRE	EMER	EMERGENCY	PB	PANELBOARD, PULL BOX, OR
		EMI	ELECTROMAGNETIC INTERFERENCE		PUSHBUTTON
A/C UNIT	AIR CONDITIONING UNIT	EMT	ELECTRICAL METALLIC TUBING	PBPU	PREFABRICATED BEDSIDE PATIENT
A/E	ARCHITECT/ENGINEER	ENCL	ENCLOSURE		UNIT
AAP	ALARM ANNUNCIATOR PANEL	EPO	EMERGENCY POWER OFF	PCB	POLYCHLORINATED BIPHENYL
AC	ALTERNATING CURRENT OR ARMORED	EPRF	EXPLOSION PROOF	PEC	PHOTOELECTRIC CELL
	CABLE	ESMT	EASEMENT	PED	PEDESTAL
ACC	ACCESSIBLE	EWC	ELECTRIC WATER COOLER	PEND	PENDANT
ADDL	ADDITIONAL	EWH	ELECTRIC WATER HEATER	PF	POWER FACTOR
ADJ	ADJACENT, ADJOINING	EXIST	EXISTING	PH	PHASE
ADO	AUTOMATIC DOOR OPENER			PNL	PANEL
AF	AMPERE FRAME OR AMP FUSE			POD	POWER OPERATED DAMPER
AFC	ABOVE FINISHED COUNTER,	FA	FIRE ALARM	PT	POTENTIAL TRANSFORMER
	AUTOMATIC FREQUENCY CONTROL,	FAAP	FIRE ALARM ANNUNCIATOR PANEL	PTRV	POWER TYPE ROOF VENTILATION
	OR AVAILABLE FAULT CURRENT	FABL	FIRE ALARM BELL	PVC	POLYVINYL CHLORIDE (PLASTIC)
AFF	ABOVE FINISHED FLOOR	FABX	FIRE ALARM BOX	PWR	POWER
AFG	ABOVE FINISHED GRADE	FACP	FIRE ALARM CONTROL PANEL		
AH	AMPERE HOUR	FC	FOOTCANDLE		
AHJ	AUTHORITY HAVING JURISDICTION	FI	FILM ILLUMINATOR	RCP	REFLECTED CEILING PLAN
AIC	AMPERE INTERRUPTING CAPACITY	FIXT	FIXTURE	REC	RECESSED
ALT	ALTERNATE	FLA	FULL LOAD AMPS	RECPT	RECEPTACLE
AMB OR A	AMBIENT	FLEX	FLEXIBLE METALLIC CONDUIT	RGS	RIGID GALVANIZED STEEL
AMP	AMPERE	FLT	FLOODLIGHT	RM	ROOM
ARCH	ARCHITECT	FLUOR	FLUORESCENT	RMS	ROOT MEAN SQUARE
ASC	AMPS SHORT CIRCUIT	FLUOR FIX	FLUORESCENT FIXTURE	REQD	REQUIRED
AT	AMPERE TRIP	FOUTT	TELEPHONE FLOOR OUTLET		
ATS	AUTOMATIC TRANSFER SWITCH	FP	FIRE PROTECTION	SCC	SHORT CIRCUIT CAPACITY
AUTO	AUTOMATIC	FT	FEET OR FOOT	SES	SERVICE ENTRANCE SECTION
AV	AUDIO VISUAL	FU SW	FUSED SWITCH	SD	SMOKE DETECTOR
		FVNR	FULL VOLTAGE NON–REVERSING	SF	SQUARE FOOT (FEET)
BAT	BATTERY	FVR	FULL VOLTAGE REVERSING	SHT	SHEET
BC	BARE COPPER			SI	INTERNATIONAL SYSTEM OF UNITS
BD	BOARD	G OR GND	GROUND OR GENERATOR	SPEC	SPECIFICATION
BFF	BELOW FINISH FLOOR	GEN	GENERATOR	SPST	SINGLE POLE, SINGLE THROW
BIL	BASIC INSULATION LEVEL	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SURF	SURFACE
BLDG	BUILDING	GTB	GROUND TERMINAL BOX	SW	SWITCH
BPIP	BOILER PLANT INSTRUMENTATION			SWBD	SWITCHBOARD
	PANEL	HID	HIGH INTENSITY DISCHARGE	SWGR	SWITCHGEAR
BRKR	BREAKER	HOA	HAND–OFF–AUTOMATIC		
BYP	BY PASS	HP	HORSEPOWER	TC	TIME CLOCK
		HT	HEIGHT	TEL	TELEPHONE
C	CONDUIT	HZ	HERTZ	TP	TWISTED PAIR
CAB	CABINET			TPS	TWISTED PAIR SHIELDED
CALC	CALCULATE	IESNA	ILLUMINATION ENGINEERING SOCIETY OF	TTB	TELEPHONE TERMINAL BOARD
CAP	CAPACITY		NORTH AMERICA	TV	TELEVISION
CAT	CATALOG	IMC	INTERMEDIATE METAL CONDUIT	TYP	TYPICAL
CATV	COMMUNITY ANTENNA TELEVISION	INCAND	INCANDESCENT		
CCR	CONTROL CONTACTOR	IR	INFRARED	UFD	UNDERFLOOR DUCT
CCTV	CLOSED CIRCUIT TELEVISION	IWH	INSTANTANEOUS WATER HEATER	UGND	UNDERGROUND
cd	CANDELA			UL	UNDERWRITERS LABORATORY
CD	CONSTRUCTION DOCUMENTS	J–BOX	JUNCTION BOX	UON	UNLESS OTHERWISE NOTED
CF	CONTRACTOR FURNISHED			UPS	UNINTERRUPTIBLE POWER SUPPLY
CF/CI	CONTRACTOR	kV	KILOVOLT	UTIL	UTILITY
	FURNISHED/CONTRACTOR INSTALLED	kVA	KILOVOLT AMPERE		
CF/OI	CONTRACTOR FURNISHED/OWNER	kVAH	KILOVOLT AMPERE PER HOUR	V	VOLT
	INSTALLED	kVAR	KILOVOLT AMPERE REACTIVE	VA	VOLT AMPERE
CFE	CONTRACTOR FURNISHED EQUIPMENT	kW	KILOWATT	VAR	VOLT AMPERE REACTIVE
CHW	CHILLED WATER	kWH	KILOWATT HOUR	VFD	VARIABLE FREQUENCY DRIVE
CHWP	CHILLED WATER PUMP	kWHM	KILOWATT HOUR METER	VOLT	VOLTAGE
CKT	CIRCUIT				
CKT BRKR	CIRCUIT BREAKER	LED	LIGHT EMITTING DIODE	W	WATT
CLF	CURRENT LIMITING FUSE	LF	LINEAR FEET (FOOT)	WH	WATER HEATER
CLG	CEILING	LM	LUMEN	WP	WEATHERPROOF
CMU	CONCRETE MASONRY UNIT	LP	LIGHT POLE		
COAX	COAX CABLE	LPS	LOW PRESSURE SODIUM	XFER	TRANSFER
COMM	COMMUNICATION	LRA	LOCKED ROTOR AMPS	XFMR	TRANSFORMER
COMPT	COMPARTMENT	LTCP	LOCAL TEMPERATURE CONTROL PANEL		
CONC	CONCRETE	LT	LIGHT		
CONT	CONTINUE	LTG	LIGHTING		
CONTR	CONTRACTOR	LTG PNL	LIGHTING PANEL		
COORD	COORDINATE	LTNG	LIGHTNING		
CPT	CONTROL POWER TRANSFORMER	LV	LOW VOLTAGE		
CRI	COLOR RENDERING INDEX				
CT	CURRENT TRANSFORMER	MATV	MASTER ANTENNA TELEVISION SYSTEM		
CTV	CABLE TELEVISION	MAX	MAXIMUM		
CU	COPPER	MC	METAL–CLAD		
CU FT	CUBIC FEET	MCA	MINIMUM CIRCUIT AMPS		
CUR	CURRENT	MCB	MAIN CIRCUIT BREAKER		
		MCC	MOTOR CONTROL CENTER		
DB	DECIBEL OR DIRECT BURIAL	MDP	MAIN DISTRIBUTION PANEL		
DC	DIRECT CURRENT	MECH	MECHANICAL		
DCP	DIMMER CONTROL PANEL	MG	MOTOR GENERATOR		
DEG C	DEGREES CELSIUS	MH	MANHOLE		
DEG F	DEGREES FAHRENHEIT	MIN	MINIMUM		
DEMO	DEMOLITION	MOCP	MAXIMUM OVERCURRENT PROTECTION		
DIAG	DIAGRAM	MLO	MAIN LUGS ONLY		
DISC	DISCONNECT	MT	MOUNT		
DISTR	DISTRIBUTION	MTD	MOUNTED		
DISTR PNL	DISTRIBUTION PANEL	MTG	MOUNTING		
DMR SW	DIMMER SWITCH	MTS	MANUAL TRANSFER SWITCH		
DN	DOWN	MV	MEDIUM VOLTAGE		
DPDT	DOUBLE POLE, DOUBLE THROW	MVA	MEGAVOLT–AMPERE		
DPST	DOUBLE POLE, SINGLE THROW	MW	MEGAWATT MICROWAVE		
DRSW	DOOR SWITCH				
DS	DISCONNECT SWITCH	NA	NOT APPLICABLE		
DWG	DRAWING	NEC	NATIONAL ELECTRICAL CODE		
		NEMA	NATIONAL ELECTRICAL MANUFACTURERS		
			ASSOCIATION		
		NEUT OR N	NEUTRAL		
		NFPA	NATIONAL FIRE PROTECTION ASSOCIATION		
		NIC	NOT IN CONTRACT		
		NL	NIGHT LIGHT		
		NO	NORMALLY OPEN		
		NS	NO SCALE		
		NTS	NOT TO SCALE		

ELECTRICAL SYMBOLS

- DELTA CONNECTION
- MOTOR, SINGLE–PHASE
- MOTOR, THREE–PHASE
- TRANSFORMER
- WYE CONNECTION
- EARTH GROUND
- JUNCTION BOX
- PULL BOX
- FUSE WITH RATING
- MOLDED CASE CIRCUIT BREAKER
- LOW–VOLTAGE DRAWOUT AIR CIRCUIT BREAKER
- HIGH–VOLTAGE OIL CIRCUIT BREAKER
- HIGH–VOLTAGE DRAWOUT AIR CIRCUIT BREAKER
- SWITCH AND FUSE UNIT
- FUSED DRAWOUT POTENTIAL TRANSFORMER
- DISCONNECT SWITCH, FUSED
- DISCONNECT SWITCH, UNFUSED
- STARTER, COMBINATION WITH DISCONNECT SWITCH
- STARTER OR MOTOR CONTROLLER
- TIME CLOCK
- GENERATOR, POWER
- EARTH GROUND
- JUNCTION BOX
- PULL BOX
- SUBSTATION
- HI VOLTAGE SWITCH ON CONCRETE PAD
- LOW VOLTAGE SWITCH ON CONCRETE PAD
- DUAL POWER AND TELECOMMUNICATIONS MANHOLE
- FLOOR OUTLET, DATA COMMUNICATION
- OUTLET, DATA COMMUNICATION
- PUSH BUTTON
- DISTRIBUTION PANEL
- LIGHTING PANEL
- PANELBOARD CABINET, FLUSH MOUNTED
- PANELBOARD CABINET, SURFACE MOUNTED
- RECEPTACLE, CLOCK HANGER
- RECEPTACLE, DUPLEX
- RECEPTACLE, DUPLEX ON EMERGENCY POWER
- RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER
- RECEPTACLE, QUADRAPLEX
- RECEPTACLE, SINGLE
- RECEPTACLE, SINGLE WITH SWITCH
- RECEPTACLE, SPECIAL PURPOSE
  A = 120V, 20A, 1 PHASE, 2–POLE, 3W, NEMA 5–20R.
  B = 208V, 20A, 1 PHASE, 2–POLE, 3W, NEMA 6–20R.
  C = 120V, 30A, 1 PHASE, 2–POLE, 3W, NEMA 5–30R.
  D = 208V, 30A, 1 PHASE, 2–POLE, 3W, NEMA 6–30R.
  E = 208V, 60A, 1 PHASE, 3–POLE, 4W, NEMA 14–60R.
  F = 208V, 30A, 3 PHASE, 3–POLE 4W, NEMA 15–30R.
  G = 208V, 50A, 3 PHASE, 3 POLE, 4W, NEMA 15–30R.
  H = 208V, 60A, 3 PHASE, 3 POLE, 4W, NEMA 15–60R.
- RECEPTACLE, SWITCHED DUPLEX
- DROP CORD, SINGLE CONVENIENCE OUTLET, 3–WIRE, GROUNDING TYPE, 20A, W/#12 CONDUCTORS IN FLEXIBLE CORD (CENTER LINE OF OUTLET: 6'–6" [1981mm] AFF. MINIMUM).
  ELECTRICAL STRIP MOLD (OUTLETS ON 2'–0" [610mm] CENTERS OR AS DESIGNATED ON DRAWINGS), MTD 3'–6" [1067mm] AFF OR AS INDICATED.
- DISCONNECT SWITCH, FUSED
- DISCONNECT SWITCH, UNFUSED
- CONDUIT TERMINATED 6" [152mm] AFF IN STANDARD BOX FOR EXTENSION TO EQUIPMENT AS DIRECTED.
- CONDUIT TERMINATED W/COUPLING (FLUSH W/FINISHED FLOOR) FOR EXTENSION TO EQUIPMENT AS DIRECTED.

ELECTRICAL SYMBOLS - LIGHTING PLAN

- SWITCH, CEILING MOUNTED PULL
- SWITCH
  BLANK = SINGLE POLE 2 = DOUBLE POLE
  3 = THREE–WAY 4 = FOUR–WAY
  D = DIMMER K = KEY OPERATED
  LV= LOW VOLTAGE L = LOCK
  LM= LOW VOLTAGE MASTER P = WITH PILOT LIGHT
  PB= PUSH BUTTON STATION RC= REMOTE CONTROL
  T = TIMER OPERATED WP= WEATHER PROOF
  X = EXPLOSION PROOF Mo= OCCUPANCY SENSOR
- SWITCH, LAMP HOLDER POLE
- LIGHT FIXTURE CEILING MOUNTED
- LIGHT FIXTURE, RECESSED FLUORESCENT, 2'x4' [610x1220mm]; LETTER INDICATES TYPE.
- LIGHT FIXTURE, RECESSED FLUORESCENT, 1'x4' [305x1220mm]; LETTER INDICATES TYPE.
- LIGHT FIXTURE, RECESSED FLUORESCENT, 1'x8' [305x2439mm]; LETTER INDICATES TYPE.
- LIGHT FIXTURE, SURFACE MOUNTED FLUORESCENT, 2'x4' [610x1220mm]; LETTER INDICATES TYPE.
- LIGHT FIXTURE, SURFACE MOUNTED FLUORESCENT, 1'x4' [305x1220mm]; LETTER INDICATES TYPE.
- LIGHT FIXTURE, SURFACE MOUNTED FLUORESCENT, 1'x8' [305x2439mm]; LETTER INDICATES TYPE.
- LIGHT FIXTURE, FLUORESCENT EMERGENCY; LETTER INDICATES TYPE.
- LIGHT FIXTURE, RECESSED FLUORESCENT, 2'x2' [610x610mm]; LETTER INDICATES TYPE.
- LIGHT FIXTURE, SURFACE MOUNTED FLUORESCENT, 2'x2' [610x610mm]; LETTER INDICATES TYPE.
- LIGHT TRACK WITH HEADS AS SHOWN
- LIGHT FIXTURE, STRIP/INDUSTRIAL FLUORESCENT; LETTER INDICATES TYPE.
- LIGHT FIXTURE, WALL MOUNTED
- LIGHTING, ONE HEAD EMERGENCY BATTERY POWER
- LIGHTING, TWO HEAD EMERGENCY BATTERY POWER
- LIGHTING, THREE HEAD EMERGENCY BATTERY POWER
- STREET LIGHT WITH BRACKET
- LIGHT POLE, ONE MAST ARM, ONE LUMINAIRE
- LIGHT POLE, TWO MAST ARMS, TWO LUMINAIRES
- LIGHT POLE, POST TOP MOUNT LUMINAIRE
- LIGHT POLE, ONE LUMINAIRE
- LIGHT POLE, TWO LUMINAIRES
- LIGHTING, EXTERIOR BUILDING
- EXTERIOR FLOOD LIGHT
- EXIT SIGN, WALL MOUNTED WITH DIRECTIONAL ARROWS AND FACES AS SHOWN
- EXIT SIGN, CEILING MOUNTED WITH DIRECTIONAL ARROWS AND FACES AS SHOWN
- LIGHT FIXTURE, BOLLARD
- LIGHT FIXTURE, DIRECTIONAL

ELECTRONIC SAFETY AND SECURITY SYMBOLS

- RECORDER; LETTER INDICATES AS FOLLOWS:
  M=MOUNT
  C–CEILING D–DESK F–FLUSH H–HIDDEN
  M–MULLION
  P–PEDESTAL R–RACK S–SURFACE W–WALL
  T=TECHNOLOGY/TYPE
  A–AUDIO D–DIGITAL V–VIDEO
- SECURITY ACCESS, ANNUNCIATOR PANEL
- SECURITY ACCESS, BUZZER. MTD 1'–6" [457mm] AFF UNLESS OTHERWISE NOTED
- SECURITY ACCESS, CONTROL UNIT WITH CLOSED CIRCUIT TELEVISION CAMERA
- SECURITY ACCESS, GENERIC "X" INDICATES THE TYPE, PROVIDE SCHEDULE OR LEGEND
- SECURITY ACCESS, HORN OR SIREN
- SECURITY ACCESS, OUTDOOR MICROWAVE TRANSMISSION UNIT
- SECURITY ACCESS, PANIC ALARM
- SECURITY ACCESS, VIDEO CAMERA WITH LENS
  M = MOTION DETECTOR
  PZ = MOTION DETECTOR WITH PAN AND ZOOM
  PTZ= MOTION DETECTOR WITH PAN, TILT, AND ZOOM
- SECURITY ACCESS, PANNING CAMERA TRAVERSE ANGLE
- SECURITY ACCESS, VIDEO CAMERA WITH LENS, ANGLE OF VIEW
- VIDEO CONTROL KEYBOARD
- VIDEO MOTION DETECTOR
- SECURITY ACCESS, SENSOR, BURIED VEHICULAR
- SECURITY ACCESS, SWITCH, BALANCED MAGNETIC CONTROL
- SECURITY ACCESS, TELEPHONE HANDSET
- CODE ONE CONTROL AND ALARM STATION. MTD 5'–0" [1524mm] AFF UNLESS OTHERWISE NOTED.
- CODE ONE TERMINAL CABINET.
- CODE ONE ANNUNCIATOR PANEL.
- CODE ONE BEDSIDE STATION.
- CODE ONE DUTY STATION, MTD 5'–0" [1524mm] AFF UNLESS OTHERWISE NOTED.
- ALARM, CHECK VALVE
- ALARM, FIRE, COMMUNICATOR
- ALARM, FIRE, PANEL; LETTERS INDICATE AS FOLLOWS:
  FACC = CENTRAL CONSOLE FACP = CONTROL PANEL
  MFACP= MASTER CONTROL PANEL FAAP = ANNUNCIATOR PANEL
- ALARM, FIRE, MANUAL PULL STATION
- ALARM, GONG
- ALARM, HORN/LIGHT, ONE ASSEMBLY
- ALARM, HORN/LIGHT, ONE ASSEMBLY WITH CHIME
- ALARM, HORN/LIGHT, SEPARATE ASSEMBLY
- ALARM, LAMP LIGHT, SIGNAL LIGHT, STROBE
- ALARM, MANUAL CONTROL
- ALARM, MINI HORN
- ALARM, SPRINKLER SYSTEM WATER FLOW BELL
- ALARM, VOICE COMMUNICATION PANEL
- ALARM, TAMPER SWITCH
- DETECTION, GAS
- DETECTION, SMOKE CONTROL AND PRESSURE PANEL
- DETECTION SWITCH, ABORT
- DETECTION SWITCH, VALVE TAMPER
- DETECTOR, FLAME FLICKER
- DETECTOR, FLOW SWITCH
- DETECTOR, HEAT
- DETECTOR, HEAT; LETTER INDICATES AS FOLLOWS:
  R/T = COMBINATION F = FIXED TEMPERATURE RISE
  R/C = RATE COMPENSATION R = RATE OF
- DETECTOR; LETTER INDICATES AS FOLLOWS:
  BLANK = SMOKE DETECTOR
  H = HEAT SMOKE
  I = IONIZATION SMOKE
  P = PHOTOELECTRIC SMOKE
  IH = IONIZATION AND HEAT SMOKE
  IP = IONIZATION AND PHOTOELECTRIC SMOKE
  PH = PHOTOELECTRIC AND HEAT SMOKE
  IPH = IONIZATION, PHOTOELECTRIC, AND HEAT
- DETECTOR, SMOKE, FOR DUCT
- DETECTOR, SWITCH LEVEL
- FIRE ALARM STATION, MANUAL PULL
- FA FIRE ALARM LINE = FA
- ELECTROMAGNETIC TYPE DOOR HOLDER OUTLET
- CITY FIRE ALARM MASTER STATION MTD 5'–6" [1676mm] AFF UNLESS NOTED.

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302–9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246–0220

FINAL CONSTRUCTION DOCUMENTS

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

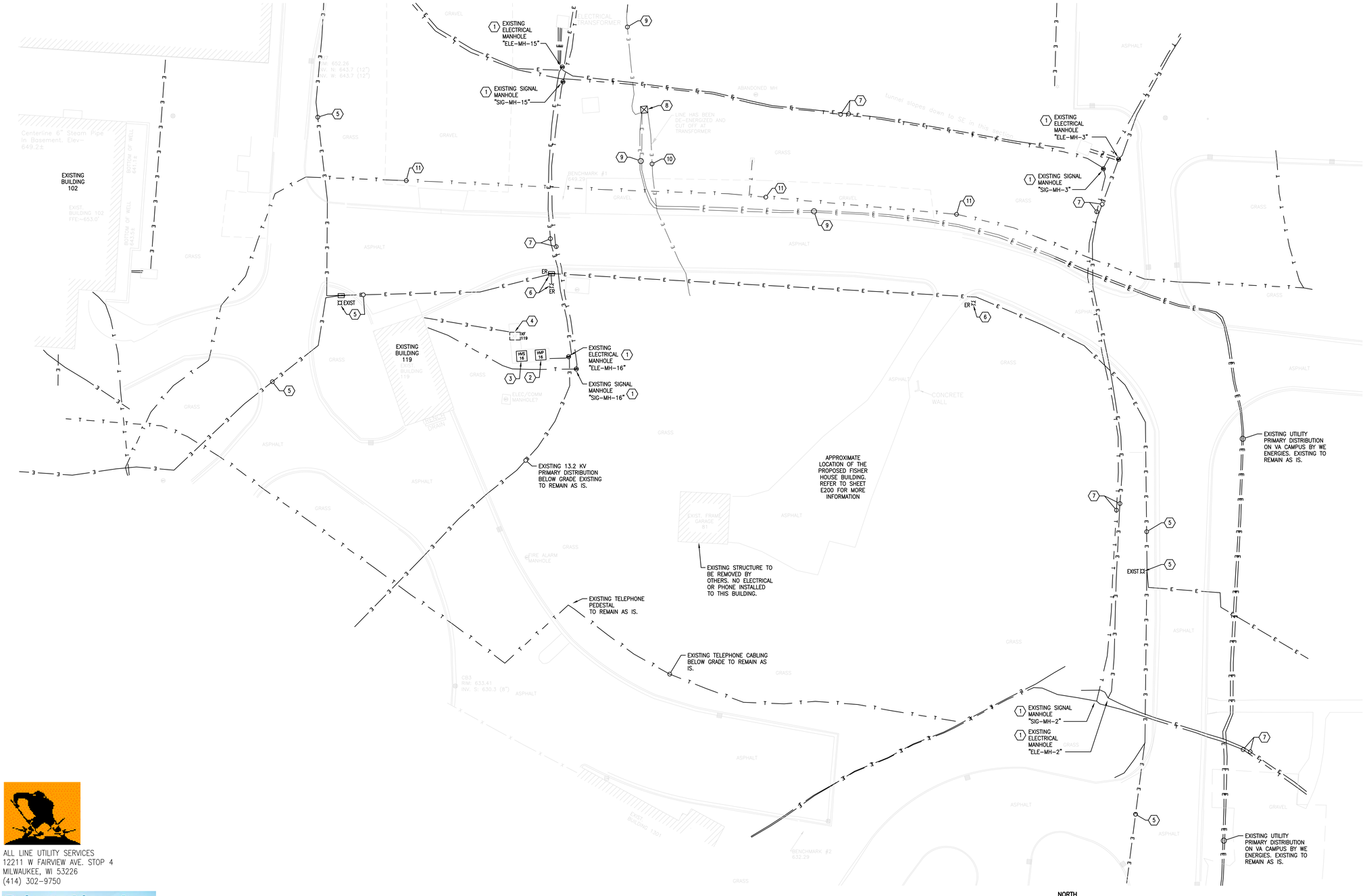
Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025
MILWAUKEE, WI
933 N. MAYFAIR RD.,
SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

Drawing Title: Electrical Symbols List and Abbreviations	Project Title: Provide Fisher House Infrastructure	Project Number: 695-13-118	Office of Facilities Management
Approved: Project Director	Location: VA Medical Center,Milwaukee, WI	Building Number: -	Department of Veterans Affairs
	Date: 22 April 2013 / Checked By: RWW / Drawn By: RWW	Drawing Number: E000	

VA FORM 08–6231, OCT 1978



GENERAL NOTES

1. — E —— E — DENOTES EXISTING UNDERGROUND ELECTRICAL CABLING. SEE NOTES FOR IDENTIFICATION.
2. — T —— T — DENOTES EXISTING UNDERGROUND COMMUNICATIONS CABLING, COULD BE VOICE TELEPHONE, FIBER OPTIC OR CABLE TV.
3. ALL EXISTING UNDERGROUND UTILITIES AS NOTED ON THIS PLAN SHALL BE CONSIDERED AS EXISTING TO REMAIN AS IS, UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO THE START OF ANY WORK.
5. ALL WORK ASSOCIATED WITH WE ENERGIES RELOCATION OF THE EXISTING PAD-MOUNTED TRANSFORMER AND PRIMARY FEEDER SHALL BE COORDINATED WITH THE UTILITY (WE ENERGIES) AS REQUIRED. THE MAIN CONTACT FOR THE VA CAMPUS FOR WE ENERGIES SHALL BE JESSICA THIBIDO-JOHNSON AT TELEPHONE (414) 221-3932. SECONDARY CONTACT PERSON AT WE ENERGIES SHALL BE BOB BARCZAK AT TELEPHONE (414) 944-5779.
6. IN THE CASE OF CONFLICTS OR DISCREPANCIES WITHIN OR AMONG THE CONTRACT DRAWINGS, THE BETTER QUALITY, MORE STRINGENT REQUIREMENTS OR GREATER QUANTITY OF WORK, AS DETERMINED BY THE GOVERNMENT, SHALL BE PROVIDED.

KEYED NOTES

1. LOCATION OF EXISTING MANHOLES FOR ELECTRICAL AND COMMUNICATIONS DISTRIBUTION WITHIN THE ZABLOCKI VA CAMPUS. ALL LOCATIONS ARE EXISTING TO REMAIN AS IS WITH NO MODIFICATIONS, UNLESS NOTED OTHERWISE.
2. LOCATION OF EXISTING PAD-MOUNTED HIGH-VOLTAGE PEDESTAL (HVP-16) FOR PRIMARY ELECTRICAL DISTRIBUTION AT 13.2 KV. EQUIPMENT IS EXISTING TO REMAIN AS IS.
3. LOCATION OF EXISTING PAD-MOUNTED HIGH-VOLTAGE SWITCH (HVS-16) FOR BUILDING 119 TRANSFORMER (XF-119). EQUIPMENT IS EXISTING TO REMAIN. RTE DISTRIBUTION MODEL #310L73A03A. 3-PHASE, 15 KV NOMINAL, 15.5 KV MAX.
4. LOCATION OF EXISTING PAD-MOUNTED TRANSFORMER (XF-119) FOR BUILDING 119 TO WEST (FORMER MEDICAL INCINERATOR, NO LONGER IN USE). TRANSFORMER IS 75 KVA, 3-PHASE, 13.2 KV PRIMARY TO 208Y/120-VOLT, 3-PHASE, 4-WIRE SECONDARY. EQUIPMENT TO BE REMOVED AND REPLACED IN THE SAME LOCATION WITH NEW PAD-MOUNTED TRANSFORMER. REFER TO SHEET E200 FOR MORE INFORMATION.
5. LOCATION OF EXISTING SITE LIGHTING POLE FIXTURE AS NOTED EXISTING TO REMAIN (EXIST). ELECTRICAL FEEDER SHOWN IS FOR THE BELOW GRADE SITE LIGHTING CIRCUIT AT 208-VOLT, 1-PHASE. CIRCUIT IS EXISTING TO REMAIN AND BE ADJUSTED FOR NEW SITE LIGHTING. REFER TO SHEET E200. EXISTING HANDHOLE FOR SITE LIGHTING TO REMAIN.
6. LOCATION OF EXISTING SITE LIGHTING POLE FIXTURE AND HANDHOLE TO BE REMOVED (ER). EXISTING SITE LIGHTING CIRCUIT TO BE ADJUSTED PER NEW WORK PLAN SHEET E200.
7. EXISTING CAMPUS POWER DISTRIBUTION (13.2 KV) AND ELECTRONIC SIGNAL DUCT BANK CONDUITS TO REMAIN AS IS. ELECTRICAL CONTRACTOR TO CONFIRM WITH VA AND OTHER SITE CONTRACTORS THAT EXISTING DISTRIBUTION CONDUITS ARE NOT DISTURBED OR DAMAGED DURING DEMOLITION WORK.
8. EXISTING UTILITY (WE ENERGIES) PAD-MOUNTED TRANSFORMER TO BE RELOCATED BY UTILITY (WE ENERGIES) AS PART OF THIS PROJECT TO AVOID THE LIMITS OF THE NEW CONSTRUCTION. COSTS FOR THIS WORK SHALL BE CARRIED IN THIS PROJECT. COORDINATE WITH THE GENERAL CONTRACTOR.
9. EXISTING UTILITY (WE ENERGIES) PRIMARY CABLING BELOW GRADE TO BE RELOCATED BY UTILITY (WE ENERGIES) TO AVOID THE LIMITS OF THE NEW CONSTRUCTION. COSTS FOR THIS WORK SHALL BE CARRIED IN THE PROJECT. COORDINATE WITH THE GENERAL CONTRACTOR.
10. WE ENERGIES PRIMARY LINE ABANDONED BELOW GRADE OR REMOVED DURING PAST PROJECT WORK. ELECTRICAL CONTRACTOR TO CONFIRM WITH WE ENERGIES AND REMOVE AS PART OF THE TRANSFORMER RELOCATION PORTION OF THIS PROJECT (SEE KEYED NOTES 8,9)
11. UNDERGROUND TELEPHONE CABLING TO BE RELOCATED TO AVOID LIMITS OF NEW CONSTRUCTION. REFER TO THE NEW WORK PLAN ON SHEET E300 FOR COMMUNICATIONS WORK FOR PROPOSED RELOCATION.

1 E100 **ELECTRICAL SITE PLAN - EXISTING CONDITIONS AND DEMOLITION**
1" = 20'-0"

NORTH

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302-9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246-0220

FINAL CONSTRUCTION DOCUMENTS

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
© CBE 2003-2012

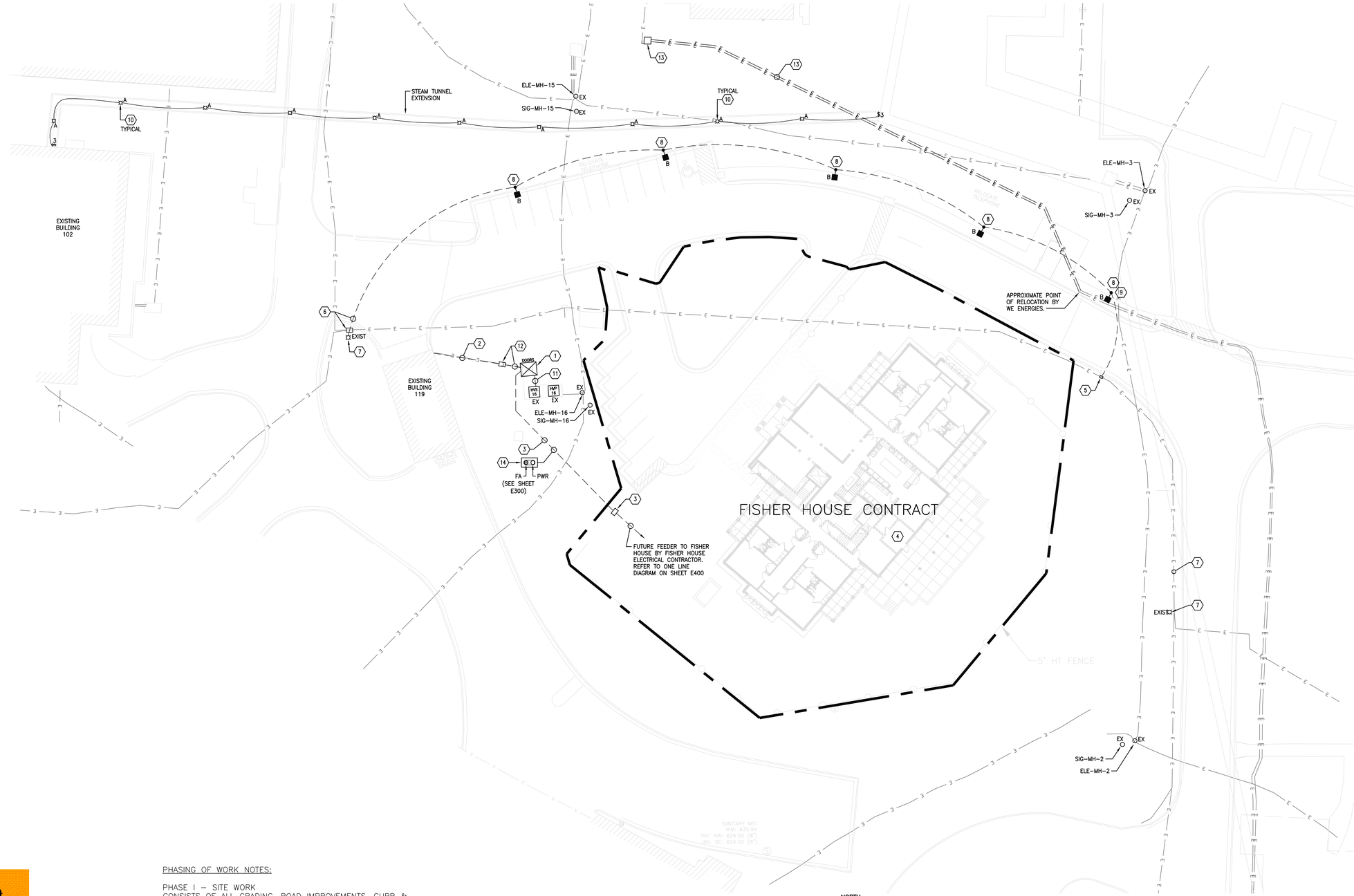
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025

MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

Drawing Title	Electrical Site Plan - Existing Conditions
Approved: Project Director	
Project Title	Provide Fisher House Infrastructure
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	RWW
Drawn By:	RWW
Project Number	695-13-118
Building Number	-
Drawing Number	E100

Office of Facilities Management
Department of Veterans Affairs

VA FORM 08-6231, OCT 1978



1 E200 **ELECTRICAL SITE PLAN - POWER AND LIGHTING**
1" = 20'-0"

NORTH

GENERAL NOTES

1. — E —— E — DENOTES EXISTING UNDERGROUND ELECTRICAL CABLING. SEE NOTES FOR IDENTIFICATION.
2. — T —— T — DENOTES EXISTING UNDERGROUND COMMUNICATIONS CABLING, COULD BE VOICE TELEPHONE, FIBER OPTIC OR CABLE TV.
3. ALL EXISTING UNDERGROUND UTILITIES AS NOTED ON THIS PLAN SHALL BE CONSIDERED AS EXISTING TO REMAIN AS IS, UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO THE START OF ANY WORK.
5. ALL WORK ASSOCIATED WITH WE ENERGIES RELOCATION SHALL BE COORDINATED WITH THE UTILITY AS REQUIRED. THE MAIN CONTACT FOR THE VA CAMPUS FOR WE ENERGIES SHALL BE JESSICA THIBIDO-JOHNSON AT TELEPHONE (414) 221-3932. SECONDARY CONTACT PERSON AT WE ENERGIES SHALL BE BOB BARCZAK AT TELEPHONE (414) 944-5779.
6. IN THE CASE OF CONFLICTS OR DISCREPANCIES WITHIN OR AMONG THE CONTRACT DRAWINGS, THE BETTER QUALITY, MORE STRINGENT REQUIREMENTS OR GREATER QUANTITY OF WORK, AS DETERMINED BY THE GOVERNMENT, SHALL BE PROVIDED.

KEYED NOTES

1. PROPOSED LOCATION FOR NEW 225 KVA, 3-PHASE TRANSFORMER, PAD-MOUNTED ON NEW CONCRETE SLAB. 13.2 KV PRIMARY TO 208Y/120-VOLT, 3-PHASE, 4-WIRE SECONDARY. PROVIDE CONCRETE PAD FOR TRANSFORMER AS REQUIRED. UTILIZE TAPS TO INCREASE SECONDARY VOLTAGE ABOVE 208-VOLT TO ACCOUNT FOR VOLTAGE DROP TO FISHER HOUSE BUILDING. COORDINATE EXACT VOLTAGE WITH VA AND FISHER HOUSE CONSTRUCTION TEAM IN FIELD.
2. NEW 225 KVA TRANSFORMER TO SUPPLY POWER (FROM SECONDARY) TO EXISTING BUILDING 119 VIA EXISTING CONDUIT DUCTBANK. ADJUST SECONDARY FEEDERS TO NEW TRANSFORMER LOCATION AS REQUIRED.
3. NEW 225 KVA TRANSFORMER TO SUPPLY POWER (FROM SECONDARY) TO NEW FISHER HOUSE STRUCTURE. PROVIDE CONDUITS AT +36" BELOW GRADE TO A 24" x 36" HANDHOLE PULL BOX LOCATION AT LIMITS OF FISHER HOUSE CONSTRUCTION AREA. PULL BOX TO BE USED BY FISHER HOUSE CONTRACTOR TEAM TO EXTEND POWER (FEEDER AND CONDUITS) TO THE FISHER HOUSE TO THE ELECTRICAL DISTRIBUTION PANEL. REFER TO DETAIL "1/E400" FOR UNDERGROUND CONCRETE PULLBOX DETAIL.
4. APPROXIMATE LOCATION OF EXISTING FISHER HOUSE MECHANICAL EQUIPMENT ROOM WHERE ELECTRICAL DISTRIBUTION SHALL BE LOCATED. THIS ROOM TO HOUSE 400-AMPERE, 208Y/120-VOLT, 3-PHASE 4-WIRE MAIN DISTRIBUTION PANEL "MDP" FOR FISHER HOUSE BUILDING.
5. PROVIDE A NEW 12"x18" HANDHOLE PULL BOX TO INTERCEPT THE EXISTING 208-VOLT SITE LIGHTING CIRCUIT AS SHOWN. EXTEND EXISTING CIRCUIT TO NEW POLE LOCATIONS ON NORTH SIDE OF ROAD AND PARKING AREA AS SHOWN USING (2) #8 AWG, (1) #10 GROUND IN 1" PVC CONDUIT BELOW GRADE.
6. AFTER THE FINAL NEW POLE LOCATION AT WEST SIDE OF NEW CONSTRUCTION, EXTEND THE 208-VOLT SITE LIGHTING CIRCUIT BACK TO THE EXISTING HANDHOLE PULL BOX AS SHOWN TO TIE BACK INTO THE REMAINING CIRCUIT UNAFFECTED BY THE NEW CONSTRUCTION. CARE SHOULD BE TAKEN TO KEEP EXISTING SITE LIGHTING POLES ILLUMINATED DURING CONSTRUCTION. REFER TO DETAIL "1/E400" FOR UNDERGROUND CONCRETE PULLBOX DETAIL.
7. EXISTING SITE LIGHTING POLE AND SITE LIGHTING CIRCUIT TO REMAIN AS IS WITH NO MODIFICATIONS WHERE SHOWN.
8. PROVIDE NEW CONCRETE POLE BASE FOR SITE LIGHTING POLES PER POLE BASE DETAIL "2/E400". PROVIDE SETBACK DISTANCE OF 24" FROM CURB EDGE OR SIDEWALK EDGE FOR INSTALLATION OF NEW CONCRETE POLE BASE.
9. AT THIS POLE LOCATION ONLY, CONTRACTOR TO COORDINATE LOCATION OF NEW POLE BASE WITH EXISTING STEAM TUNNEL PRIOR TO INSTALLATION.
10. PROVIDE TYPE "A" FIXTURES WITHIN NEW STEAM TUNNEL AS SHOWN. SURFACE MOUNT FIXTURES TO CEILING OF TUNNEL. CONNECT TO THE EXISTING TUNNEL LIGHTING CIRCUIT INSTALLED IN THE EXISTING STEAM TUNNEL. CONTRACTOR TO CONFIRM THE CIRCUIT HAS CAPACITY FOR THE ADDITIONAL LIGHTING LOAD PRIOR TO INSTALLATION. BRING TO THE ATTENTION OF THE ENGINEER IF THE CIRCUIT DOES NOT HAVE SUFFICIENT CAPACITY.
11. PROVIDE NEW PRIMARY CABLING BETWEEN HIGH VOLTAGE SWITCH (HVS-16) AND NEW TRANSFORMER LOCATION. REFER TO ONE LINE DIAGRAM ON SHEET E400 FOR MORE INFORMATION. INSTALL CONDUIT IN CONCRETE DUCT BANK AS REQUIRED BY VA STANDARDS. EXISTING CONDUITS CAN BE REUSED IF POSSIBLE.
12. PROVIDE A NEW 24" x 36" HANDHOLE PULL BOX LOCATION SOMEWHERE NEAR NEW TRANSFORMER LOCATION TO INTERCEPT EXISTING FEEDER TO BUILDING 119. PROVIDE SPLICE WITHIN PULL BOX AND EXTEND NEW FEEDER (CONDUIT AND WIRE) TO SECONDARY OF NEW TRANSFORMER AS NEEDED. REFER TO THE ONE LINE DIAGRAM ON SHEET E400. REFER TO DETAIL "1/E400" FOR UNDERGROUND CONCRETE PULLBOX DETAIL.
13. PROPOSED FINAL LOCATION OF RELOCATED TRANSFORMER BY WE ENERGIES AND PROPOSED NEW ROUTING OF UNDERGROUND PRIMARY CABLING BY WE ENERGIES. ALL WORK TO BE COMPLETED BY WE ENERGIES. GENERAL CONTRACTOR TO CARRY ALLOWANCE FOR THIS WORK WITHIN THE PROJECT BID AND SHALL COORDINATE THIS WORK WITH WE ENERGIES ONCE PROJECT IS UNDER CONSTRUCTION.
14. PROVIDE CONCRETE ENCASED DUCT BANK FOR POWER AND FIRE ALARM CONDUITS FOR FISHER HOUSE AS SHOWN. REFER TO E300 FOR FIRE ALARM WORK. REFER TO DETAIL "3/E400" FOR DUCT BANK DETAILS.

PHASING OF WORK NOTES:

PHASE I – SITE WORK
CONSISTS OF ALL GRADING, ROAD IMPROVEMENTS, CURB & GUTTER, UTILITY EXTENSIONS AND RELOCATIONS, STEAM TUNNEL AND STEAM PIPING SYSTEM INSTALLATION, GAS METER UPGRADE, LANDSCAPING, SIDEWALK INSTALLATION, SITE LIGHTING AND ANY OTHER IMPROVEMENTS AS ILLUSTRATED ON THE PLANS.

PHASE II – FUTURE BUILDING SYSTEMS
CONSISTS OF ALL FISHER HOUSE BUILDING SYSTEM INSTALLATIONS AS REQUIRED BY THE PLANS (REFERENCE MECHANICAL AND ELECTRICAL DRAWINGS FOR DETAILED SCOPE OF WORK). PHASE II CONSISTS OF INSTALLATION OF BUILDING SYSTEM IMPROVEMENTS AFTER SIGNIFICANT CONSTRUCTION OF THE FISHER HOUSE IS COMPLETE (UNDER SEPARATE CONTRACT). PHASE II IS TO BE COORDINATED DIRECTLY WITH VA COR AND FISHER HOUSE REPRESENTATIVE. WORK IS TO BE COMPLETED AFTER THE FISHER HOUSE BUILDING IS AT LEAST 80% COMPLETE.

LIGHT FIXTURE SCHEDULE

TAG	LAMP DATA NO	LAMP DATA TYPE	DESCRIPTION	LIGHTING FIXTURE MAKE	LIGHTING FIXTURE CATALOG NUMBER	MOUNT	CEILING TYPE	FIXTURE DEPTH	ACCEPTABLE MANUFACTURERS	VOLT	SEE NOTE
A	–	LED WITH UNIT	LED TUNNEL LIGHT – 22" SURFACE STRIP FIXTURE	LUMINAIRE LTG	VPF42HO-28WHP-4000K-120-CP-BLK	SURFACE	CONCRETE	2.70"	DAYBRITE, LITHONIA	120	1
B	–	LED WITH UNIT	SITE LIGHTING LED AREA LIGHT WITH 20-FOOT POLE	GARDCO	SFA-1-3-130LA-NW-UNIV-BLP	POLE	NONE	3"	MCGRAW EDISON, METALUX	208	2

NOTES:
1) ELECTRICAL CONTRACTOR TO CONFIRM THE VOLTAGE OF THE EXISTING TUNNEL LIGHTING CIRCUIT PRIOR TO INSTALLATION TO CONFIRM PROPER DRIVER IS INCLUDED. PROVIDE MULTI-VOLT DRIVER IF AVAILABLE (120 TO 277V)
2) FIXTURE TO BE MOUNTED ON A 20-FOOT TALL, ROUND TAPERED STEEL POLE IN BLACK FINISH TO MATCH EXISTING POLES ON THE ZABLOCKI VA CAMPUS.

FINAL CONSTRUCTION DOCUMENTS

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302-9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246-0220

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates — Landscape Architects
Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

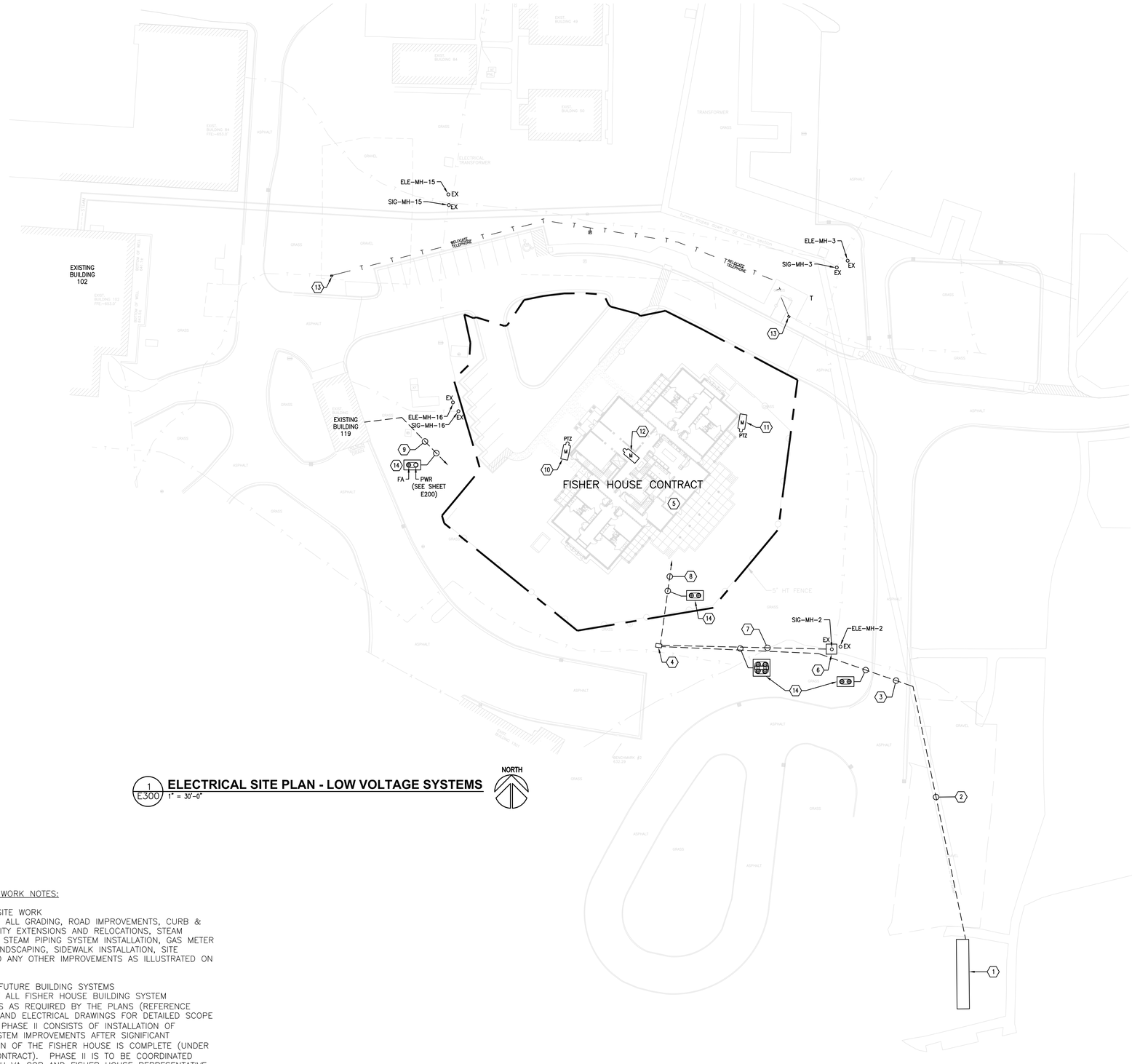
PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC. © CBE 2003-2012
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025
MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-5004
FAX: (414) 258-6154

Drawing Title	Electrical Site Plan - Power and Lighting
Approved: Project Director	
Project Title	Provide Fisher House Infrastructure
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	RWW
Drawn By:	RWW
Project Number	695-13-118
Building Number	-
Drawing Number	E200

Office of Facilities Management
Department of Veterans Affairs

VA FORM 08-6231, OCT 1978



1 E300 **ELECTRICAL SITE PLAN - LOW VOLTAGE SYSTEMS**
1" = 30'-0"

NORTH

GENERAL NOTES

1. —T—T— DENOTES EXISTING UNDERGROUND COMMUNICATIONS CABLING, COULD BE VOICE TELEPHONE, FIBER OPTIC OR CABLE TV.
2. ALL EXISTING UNDERGROUND UTILITIES AS NOTED ON THIS PLAN SHALL BE CONSIDERED AS EXISTING TO REMAIN AS IS, UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO THE START OF ANY WORK.
4. ALL LOW VOLTAGE CABLING INDICATED TO BE INSTALLED WITHIN CONDUITS SHALL BE INSTALLED IN COMPLIANCE WITH ALL VA STANDARDS, INCLUDING THE USE OF FLEXIBLE INNERDUCT TUBING. ALL CONDUITS INSTALLED BELOW GRADE OUTDOORS FOR LOW VOLTAGE SYSTEMS SHALL BE CONCRETE ENCASED IN DUCT BANK. REFER TO DUCT BANK DETAILS "3/E400"
5. ALL COMMUNICATIONS 4" CONDUITS FOR LOW VOLTAGE SYSTEMS SHALL RECEIVE FOUR (4) 1" INNERDUCT PATHWAYS WITH PULL STRING INSTALLED WITHIN CONDUIT BY CONTRACTOR.
6. VOICE CABLING SCOPE OF WORK: CONTRACTOR TO INSTALL A 100-PAIR VOICE CABLE FROM EXISTING PBX LOCATION IN BUILDING 111 TO FISHER HOUSE. 50-PAIR TO BE TERMINATED AND BE ACTIVE FOR USE BY THE FISHER HOUSE. 50-PAIR TO BE LEFT UN-ACTIVE FOR FUTURE POTENTIAL USE.
7. DATA NETWORK CABLING SCOPE OF WORK: CONTRACTOR TO INSTALL A SINGLE MODE FIBER OPTIC CABLING TO FISHER HOUSE FROM EXISTING FIBER OPTIC NETWORK DISTRIBUTION LOCATED ON A PATHWAY BETWEEN BUILDING 111 AND BUILDING 112 (BOILER PLANT)
8. FIRE ALARM CABLING SCOPE OF WORK: CONTRACTOR TO INSTALL MULTI-MODE FIBER OPTIC CABLING TO TIE NEW FISHER HOUSE FIRE ALARM SYSTEM INTO THE EXISTING VA CAMPUS FIRE ALARM NETWORK LOOP. CONNECT TO EXISTING FIRE ALARM NETWORK LOOP AT BUILDING 119.
9. CABLE TV SCOPE OF WORK: CONTRACTOR TO EXTEND CABLE TV SERVICE FROM AVAILABLE DISTRIBUTION IN THE MAUSOLEUM AIR VENT TO FISHER HOUSE BUILDING AS REQUIRED. ONCE INSIDE FISHER HOUSE, PROVIDE THE NECESSARY LIGHTNING PROTECTION ON THE INCOMING LINE AND A SIGNAL AMPLIFIER AS NECESSARY.
10. SECURITY SYSTEM VIDEO SURVEILLANCE SCOPE OF WORK: CONTRACTOR TO PROVIDE A VIDEO SURVEILLANCE SYSTEM CONSISTING OF THREE (3) CAMERAS AS SHOWN WITH A DVR SYSTEM (RACK MOUNTED) FOR VIDEO STORAGE. DVR SYSTEM TO BE ACCESSIBLE TO THE VA CAMPUS POLICE DEPARTMENT VIA THE CAMPUS DATA NETWORK WHEN NECESSARY TO REVIEW THE DVR VIDEO STORAGE. CONTRACTOR SHALL COORDINATE WITH THE FISHER HOUSE CONTRACTORS IN FIELD FOR INSTALLATION OF THE CAMERAS ON THE BUILDING.
11. COORDINATE INSTALLATION (MOUNTING AND CABLING) OF VIDEO SURVEILLANCE CAMERAS WITHIN BUILDING WITH FISHER HOUSE CONTRACTOR TEAM AND THE VA CAMPUS AS REQUIRED AS PART OF PHASE II SCOPE OF WORK.
12. IN PHASE II SCOPE OF WORK, ALL LOW-VOLTAGE WORK INDICATED SHALL BE MOUNTED INTO DATA EQUIPMENT RACK TO BE FURNISHED AND INSTALLED BY THE FISHER HOUSE CONTRACTOR.
13. ALL LOW-VOLTAGE HORIZONTAL CABLING DISTRIBUTION (OUTLETS AND CABLE) WITHIN THE FISHER HOUSE BUILDING SHALL BE INSTALLED BY FISHER HOUSE CONTRACTORS UNDER A SEPARATE SCOPE OF WORK. OUR SCOPE OF WORK IS TO INSTALL CABLING TO THE BUILDING ONLY, UNLESS NOTED OTHERWISE.
14. IN THE CASE OF CONFLICTS OR DISCREPANCIES WITHIN OR AMONG THE CONTRACT DRAWINGS, THE BETTER QUALITY, MORE STRINGENT REQUIREMENTS OR GREATER QUANTITY OF WORK, AS DETERMINED BY THE GOVERNMENT, SHALL BE PROVIDED.

KEYED NOTES

1. LOCATION OF EXISTING MAUSOLEUM AIR VENT BUILDING. INSIDE THIS FACILITY ARE ACCESS TO TUNNELS TO EXISTING BUILDING FOR A LOW-VOLTAGE CABLING PATHWAY. MAUSOLEUM AIR VENT BUILDING TO BE USED TO INSTALL 100-PAIR VOICE CABLING AND CAMPUS CABLE TV DISTRIBUTION TO THE FISHER HOUSE BUILDING.
2. PROVIDE TWO (2) 4" CONDUITS ALONG IN EXISTING STEAM TUNNEL FROM MAUSOLEUM AIR VENT AS SHOWN. PROVIDE 18"x18"x6" PULL BOX WITH REMOVABLE COVER IN TUNNEL WHERE CONDUITS SHALL EXIT AND MOVE WEST.
3. TWO (2) 4" CONDUITS SHALL LEAVE TUNNEL AND SHALL CROSS EXISTING PAVED DRIVE AS SHOWN. TRENCH CONDUITS BELOW PAVED AREA AND PATCH TO RESTORE AS-FOUND EXISTING CONDITIONS.
4. PROVIDE A 30" WIDE x 48" LONG x 36" DEEP BELOW GRADE HANDHOLE PULL BOX FOR LOW-VOLTAGE CABLING. EXTEND TWO (2) 4" CONDUITS AS NOTED PREVIOUSLY TO THIS LOCATION. BOX TO HAVE SUFFICIENT CAPACITY TO ALLOW FOR CABLING TO BE COILED AND LEFT FOR FUTURE EXTENSION TO THE FISHER HOUSE BUILDING WHEN COMPLETED. CONTRACTOR TO LEAVE A MINIMUM OF 150-FEET OF SLACK CABLING TO ALLOW FOR THIS FUTURE EXTENSION. REFER TO DETAIL "1/E400" FOR UNDERGROUND CONCRETE PULLBOX DETAIL.
5. APPROXIMATE LOCATION OF EXISTING FISHER HOUSE MECHANICAL EQUIPMENT ROOM WHERE TELECOMMUNICATIONS EQUIPMENT RACKS ARE TO BE LOCATED. EQUIPMENT RACK AND TELECOM ENTRANCE CONDUITS LEAVING BUILDING PAST FOUNDATION WALLS TO BE INSTALLED BY FISHER HOUSE CONTRACTORS. COORDINATE IN FIELD WITH VA AND OTHER CONTRACTORS AS NEEDED.
6. LOCATION OF EXISTING SIGNAL COMMUNICATIONS MANHOLE (SIG-MH-2) CONTAINING 48 STRANDS OF UNUSED SINGLE MODE FIBER OPTIC CABLING. CONTRACTOR SHALL FUSION SPLICE AND EXTEND 12 STRANDS OF SINGLE-MODE FIBER OPTIC CABLING FOR EXTENSION TO THE FISHER HOUSE BUILDING FOR CONNECTION TO THE VA CAMPUS DATA NETWORK.
7. EXTEND TWO (2) 4" CONDUITS BELOW GRADE FROM SIGNAL MANHOLE (SIG-MH-2) TO NEW HANDHOLE PULL BOX AS SHOWN FOR DATA FIBER OPTIC CABLING. ONE ACTIVE – ONE SPARE CONDUIT. CONDUIT ROUTING CAN BE WITHIN SAME DUCT BANK AS VOICE/TV CABLING CONDUIT AS SHOWN (WHERE APPLICABLE)
8. UNDER PHASE II (SEE "PHASING OF WORK NOTES" ON THIS SHEET), CONTRACTOR SHALL RETURN TO COMPLETE THE INSTALLATION OF TWO (2) 4" CONDUITS TO BUILDING AND SHALL FINISH THE INSTALLATION OF THE CABLING TO THE BUILDING AND SHALL TERMINATE ALL CABLING WITH THE FISHER HOUSE BUILDING ON THE EQUIPMENT RACKS FURNISHED BY FISHER HOUSE CONTRACTOR.
9. PROVIDE ONE (1) 4" CONDUIT BELOW GRADE FROM BUILDING 119 TO THE FISHER HOUSE BUILDING FOR FIRE ALARM NETWORK MULTI-MODE FIBER OPTIC CABLING. FISHER HOUSE TO INSTALL A FIRE ALARM SYSTEM (SIEMENS MODEL FS-250 FIRESEEKER) COMPATIBLE WITH THE ZABLOCKI VA CAMPUS STANDARDS. NEW FIRE ALARM PANEL MUST BE TIED INTO THE EXISTING SIEMENS NETWORK LOOP. PROVIDE ONE FIBER CABLE TO FISHER HOUSE AND ONE FIBER CABLE BACK TO BUILDING 119 TO COMPLETE LOOP. FIELD COORDINATE EXACT LOCATION OF FIRE ALARM PANEL WITHIN THE FISHER HOUSE BUILDING AND EXTEND CONDUIT TO THAT LOCATION. EXACT ROUTING IS NOT SHOWN ON THIS PLAN. COORDINATE IN FIELD WITH VA AND FISHER HOUSE CONSTRUCTION.
10. PROVIDE A SECURITY CAMERA MOUNTED TO CORNER OF BUILDING FOR VIEW OF FRONT ENTRY AND PARKING AREAS. CAMERA SHALL BE PAN-TILT-ZOOM AS INDICATED. REFER TO DETAIL "4/E400" FOR MORE INFORMATION.
11. PROVIDE A SECURITY CAMERA MOUNTED TO CORNER OF BUILDING FOR VIEW OF REAR PATIO AREA. CAMERA SHALL BE PAN-TILT-ZOOM AS INDICATED. REFER TO DETAIL "4/E400" FOR MORE INFORMATION.
12. PROVIDE A SECURITY CAMERA MOUNTED TO CEILING WITHIN ENTRY FOYER CORRIDOR AS SHOWN. CAMERA CAN BE FIXED AND SHALL BE AIMED BACK TOWARDS FRONT ENTRY DOOR AS SHOWN.
13. PROVIDE A NEW 12"x18" HANDHOLE PULL BOX TO INTERCEPT AND RELOCATE THE EXISTING TELEPHONE CABLING THAT CONFLICTS WITH NEW STREET AND PARKING AREAS. PROVIDE NEW CABLING AS NEEDED TO MATCH EXISTING AND ROUTE AROUND PAVED AREAS AS SHOWN. INSTALL CABLING IN A NEW 4" CONDUIT INSTALLED BELOW GRADE. REFER TO DETAIL "1/E400" FOR UNDERGROUND CONCRETE PULLBOX DETAIL.
14. PROVIDE CONCRETE ENCASED DUCT BANK FOR COMMUNICATIONS CONDUITS TO FISHER HOUSE AS SHOWN. REFER TO DETAIL "3/E400" FOR DUCT BANK DETAILS.

PHASING OF WORK NOTES:

PHASE I – SITE WORK
CONSISTS OF ALL GRADING, ROAD IMPROVEMENTS, CURB & GUTTER, UTILITY EXTENSIONS AND RELOCATIONS, STEAM TUNNEL AND STEAM PIPING SYSTEM INSTALLATION, GAS METER UPGRADE, LANDSCAPING, SIDEWALK INSTALLATION, SITE LIGHTING AND ANY OTHER IMPROVEMENTS AS ILLUSTRATED ON THE PLANS.

PHASE II – FUTURE BUILDING SYSTEMS
CONSISTS OF ALL FISHER HOUSE BUILDING SYSTEM INSTALLATIONS AS REQUIRED BY THE PLANS (REFERENCE MECHANICAL AND ELECTRICAL DRAWINGS FOR DETAILED SCOPE OF WORK). PHASE II CONSISTS OF INSTALLATION OF BUILDING SYSTEM IMPROVEMENTS AFTER SIGNIFICANT CONSTRUCTION OF THE FISHER HOUSE IS COMPLETE (UNDER SEPARATE CONTRACT). PHASE II IS TO BE COORDINATED DIRECTLY WITH VA COR AND FISHER HOUSE REPRESENTATIVE. WORK IS TO BE COMPLETED AFTER THE FISHER HOUSE BUILDING IS AT LEAST 80% COMPLETE.

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302-9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246-0220

FINAL CONSTRUCTION DOCUMENTS

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

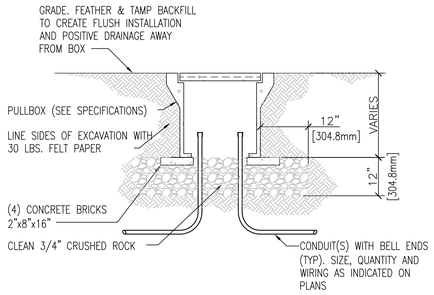
Damon Farber Associates
Landscape Architects
Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
© 1996 2009/2010
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025
MILWAUKEE, WI
933 N. MAYFAIR RD., SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

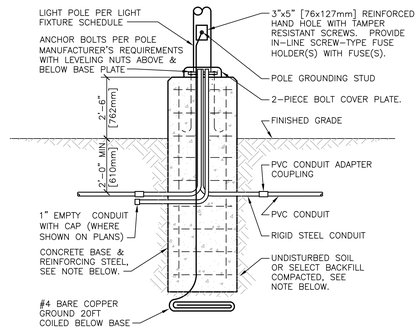
Drawing Title: Electrical Site Plan - Low Voltage Systems	Project Title: Provide Fisher House Infrastructure	Project Number: 695-13-118	Office of Facilities Management
Approved: Project Director	Location: VA Medical Center,Milwaukee, WI	Building Number: -	
	Date: 22 April 2013 / Checked By: RWW / Drawn By: RWW	Drawing Number: E300	Department of Veterans Affairs

VA FORM 08-6231, OCT 1978



1 UNDERGROUND CONCRETE PULLBOX

SCALE: NONE — INSTALLATION IN TURF AREAS

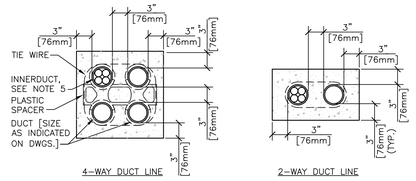


NOTE:

BACKFILL, CONCRETE, REINFORCING STEEL, AND ANCHOR BOLTS ARE SHOWN FOR REFERENCE ONLY. STRUCTURAL DESIGN IS SHOWN ON STRUCTURAL DRAWINGS.

2 POLE BASE DETAIL

NTS — (TURF AREAS)

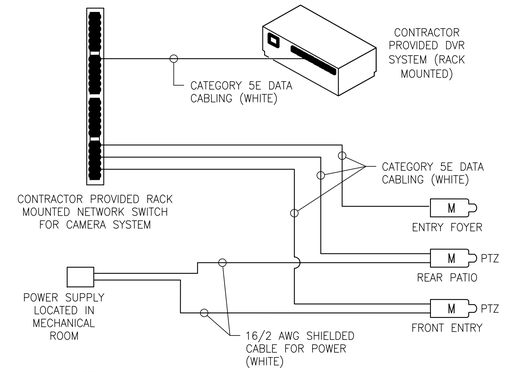


DUCT BANK NOTES:

1. CONCRETE SHALL BE 2000 P.S.I. @ 28 DAYS, OR AS SPECIFIED.
2. PROVIDE REINFORCING RODS ON TOP AND BOTTOM OF DUCTS WHEN CROSSING OR PLACED IN ROADWAYS.
3. MINIMUM COVER TO TOP OF ENVELOPE SHALL BE 24" [610mm].
4. PROVIDE MINIMUM 6" [152mm] SPACE BETWEEN POWER AND TELECOMMUNICATION DUCTS. INCREASE SIZE AS REQUIRED.
5. INNERDUCT QUANTITY AND SIZE AS INDICATED ON PLANS.

3 DUCT BANK DETAILS

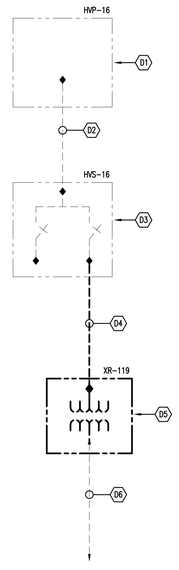
NTS



NOTE:
CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A COMPLETE FULLY FUNCTIONAL SYSTEM FOR VIDEO SURVEILLANCE, INCLUDING CAMERAS, POWER SUPPLIES, CABLING, NETWORK SWITCH AND DVR SYSTEM AS REQUIRED. REFER TO DIVISION 28 SPECIFICATIONS.

4 VIDEO SURVEILLANCE - CAMERA RISER

SCALE: NONE



KEYED NOTES - DEMO WORK

D1 EXISTING PRIMARY HIGH-VOLTAGE PEDESTAL (HVP-16) TO REMAIN AS IS.
13.2 KV DISTRIBUTION. EQUIPMENT INSTALLED IN LATE 1980'S DURING CAMPUS POWER DISTRIBUTION UPGRADE.

D2 EXISTING 15 KV FEEDER TO REMAIN AS IS FROM HVP-16 TO HVS-16.

D3 EXISTING PRIMARY HIGH-VOLTAGE SWITCH (HVS-16) AS SHOWN ON THE FLOOR PLANS. RTE DISTIBUTION CATALOG #310L73403A. EQUIPMENT INSTALLED IN LATE 1980'S DURING CAMPUS POWER DISTRIBUTION UPGRADE.

D4 EXISTING FEEDER FROM HVS-16 TO TRANSFORMER TO BE REMOVED AND REPLACED WITH NEW FEEDER. SEE NEW WORK ONE LINE DIAGRAM

D5 EXISTING TRANSFORMER XR-119 FOR BUILDING 119 (STORAGE - FORMER MEDICAL INCINERATOR). 75 KVA, THREE PHASE, 13.2 KV PRIMARY, 208Y/120-VOLT SECONDARY. TRANSFORMER TO BE REMOVED DURING DEMOLITION WORK FOR REPLACEMENT WITH NEW.

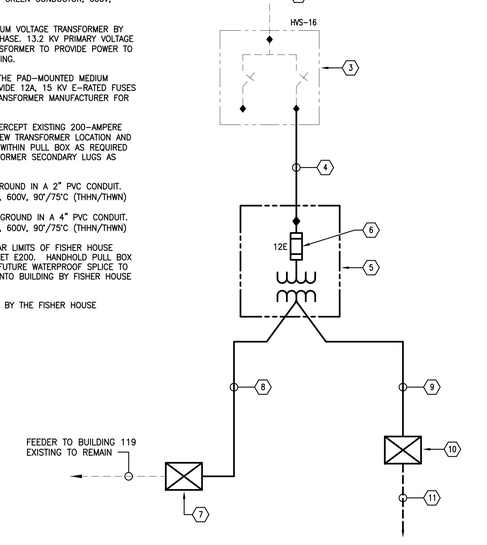
D6 EXISTING SECONDARY FEEDER (200-AMPERE) AT 208Y/120-VOLT, 3-PHASE, 4-WIRE TO REMAIN AS IS. EXISTING FEEDER TO BE INTERCEPTED AND ROUTED TO NEW TRANSFORMER LOCAITON. SEE NEW WORK ONE LINE DIAGRAM.

ELECTRICAL ONE LINE RISER DIAGRAM - DEMOLITION WORK

NO SCALE

KEYED NOTES - NEW WORK

1. EXISTING PRIMARY HIGH-VOLTAGE PEDESTAL (HVP-16) TO REMAIN AS IS. 13.2 KV DISTRIBUTION. EQUIPMENT INSTALLED IN LATE 1980'S DURING CAMPUS POWER DISTRIBUTION UPGRADE.
2. EXISTING 15 KV FEEDER TO REMAIN AS IS FROM HVP-16 TO HVS-16.
3. EXISTING PRIMARY HIGH-VOLTAGE SWITCH (HVS-16) AS SHOWN ON THE FLOOR PLANS. RTE DISTIBUTION CATALOG #310L73403A. EQUIPMENT INSTALLED IN LATE 1980'S DURING CAMPUS POWER DISTRIBUTION UPGRADE.
4. (3) #1/0 AWG COPPER CONDUCTORS, 15KV EPR-133% MV-105 AND (1) #4 AWG COPPER EQUIPMENT GROUNDING GREEN CONDUCTOR, 600V, 90°/75°C (THHN/THWN)
5. NEW PAD MOUNTED, LIQUID FILLED, MEDIUM VOLTAGE TRANSFORMER BY ELECTRICAL CONTRACTOR. 225 KVA, 3-PHASE. 13.2 KV PRIMARY VOLTAGE 208Y/120V SECONDARY VOLTAGE. TRANSFORMER TO PROVIDE POWER TO BUILDING 119 AND FISHER HOUSE BUILDING.
6. PROVIDE PRIMARY FUSING INTEGRAL TO THE PAD-MOUNTED MEDIUM VOLTAGE TRANSFORMER AS SHOWN. PROVIDE 12A, 15 KV E-RATED FUSES (12E) OR AS RECOMMENDED BY THE TRANSFORMER MANUFACTURER FOR THE KVA SIZE TRANSFORMER.
7. PROVIDE A HANDHOLE PULL BOX TO INTERCEPT EXISTING 200-AMPERE FEEDER (3-PHASE, 4-WIRE) BETWEEN NEW TRANSFORMER LOCATION AND EXISTING BUILDING 119. CREATE SPLICE WITHIN PULL BOX AS REQUIRED FOR NEW FEEDER BACK TO NEW TRANSFORMER SECONDARY LUGS AS REQUIRED.
8. (4) #3/0 AWG & (1) #6 AWG GREEN GROUND IN A 2" PVC CONDUIT. CONDUCTORS ARE COPPER CONDUCTORS, 600V, 90°/75°C (THHN/THWN)
9. (4) #600 KCMIL & (1) #3 AWG GREEN GROUND IN A 4" PVC CONDUIT. CONDUCTORS ARE COPPER CONDUCTORS, 600V, 90°/75°C (THHN/THWN)
10. PROVIDE A HANDHOLE PULL BOX TO NEAR LIMITS OF FISHER HOUSE CONSTRUCTION AREA AS SHOWN ON SHEET E200. HANDHOLD PULL BOX TO BE OF SUFFICIENT SIZE TO CREATE FUTURE WATERPROOF SPLICE TO ALLOW FOR FEEDER TO BE CONTINUED INTO BUILDING BY FISHER HOUSE CONSTRUCTION ELECTRICAL CONTRACTOR.
11. FUTURE FEEDER EXTENSION TO BUILDING BY THE FISHER HOUSE CONSTRUCTION ELECTRICAL CONTRACTOR.



ELECTRICAL ONE LINE RISER DIAGRAM - NEW WORK

NO SCALE

ONE LINE DIAGRAM EQUIPMENT DESIGNATIONS

——— ALL ITEMS INDICATED WITH DARK SOLID LINE ARE NEW EQUIPMENT OR FEEDERS TO BE INSTALLED BY THE ELECTRICAL CONTRACTOR AS PART OF THIS PROJECT

– – – – ALL ITEMS INDICATED WITH DARK DASHED LINES ARE EQUIPMENT OR FEEDERS THAT ARE EXISTING TO BE REMOVED AS PART OF THIS PROJECT.

– – – – ALL ITEMS INDICATED WITH A LIGHT DASHED LINES ARE EQUIPMENT OR FEEDERS THAT ARE EXISTING TO REMAIN AS PART OF THIS PROJECT.

GENERAL NOTES

1. THE EXISTING PRIMARY DISTRIBUTION ON THE MILWAUKEE ZABLOCKI VA CAMPUS IS 13.2 KV ALL NEW PRIMARY DISTRIBUTION EQUIPMENT SHOULD BE RATED FOR THIS NOMINAL VOLTAGE (15 KV RATING).
2. HIGH-VOLTAGE SWITCH (HVS-16) ALSO FEEDS TO A 50-KVA, SINGLE PHASE TRANSFOMER (120/240-VOLT SECONDARY) THAT WAS TO FEED A FORMER GREENHOUSE BUILDING. THIS EQUIPMENT IS EXISTING TO REMAIN AS IS.
3. COORDINATE WITH THE MILWAUKEE ZABLOCKI VA ELECTRICAL MAINTENANCE STAFF AS NEEDED DURING CONSTRUCTION REGARDING THE PRIMARY ELECTRICAL DISTRIBUTION SYSTEM. THIS SHALL INCLUDE ANY REQUIRED OUTAGES OR DOWNTIME TO EXISTING EQUIPMENT.
4. THE ELECTRICAL INSTALLATION WORK SHALL BE IN FULL COMPLIANCE WITH ALL LOCAL, STATE AND NATIONAL CODES. THE STATE OF WISCONSIN ELECTRICAL CODE (SPS CHAPTER 316) CURRENTLY ADOPTED IS THE 2008 NATIONAL ELECTRICAL CODE (NEC).
5. ALL ELECTRICAL WIRING AND BUSSING WITHIN ELECTRICAL DISTRIBUTION EQUIPMENT SHALL BE COPPER. ALUMINUM IS NOT ACCEPTABLE PER VA STANDARDS AND SPECIFICATIONS.
6. IN THE CASE OF CONFLICTS OR DISCREPANCIES WITHIN OR AMONG THE CONTRACT DRAWINGS, THE BETTER QUALITY, MORE STRINGENT REQUIREMENTS OR GREATER QUANTITY OF WORK, AS DETERMINED BY THE GOVERNMENT, SHALL BE PROVIDED.

ALL LINE UTILITY SERVICES
12211 W FAIRVIEW AVE. STOP 4
MILWAUKEE, WI 53226
(414) 302-9750

Private Lines Inc.

AAPRIVATE LINES INC.
E3221 STATE RD. 161
IOLA, WI 54945
(888) 246-0220

FINAL CONSTRUCTION DOCUMENTS

Revisions:	Date

Dept. of Veterans Affairs
Medical Center
5000 W. National Avenue
Milwaukee, WI

CONSULTANTS:

THE MATRIX GROUP ENGINEERING CONSULTANTS

Damon Farber Associates — Landscape Architects
Damon Farber Associates
923 Nicollet Mall
Minneapolis, MN 55402
phone 612.332.7522
fax 612.332.0936
www.damonfarber.com

PROJECT LEAD:

CHEQUAMEGON BAY ENGINEERING, INC.
ASHLAND, WI
211 6TH STREET WEST
ASHLAND, WI. 54806
PHONE: (715) 682-6004
FAX: (715) 682-6025
MILWAUKEE, WI
633 N. MAYFAIR RD., SUITE 109
MILWAUKEE, WI. 53226
PHONE: (414) 258-6004
FAX: (414) 258-6154

Drawing Title	Electrical One Line Diagram and Details
Project Title	Provide Fisher House Infrastructure
Project Number	695-13-118
Building Number	-
Approved: Project Director	
Location	VA Medical Center,Milwaukee, WI
Date	22 April 2013
Checked By:	RWW
Drawn By:	RWW
Drawing Number	E400

Office of Facilities Management
Department of Veterans Affairs

VA FORM 08-6231, OCT 1978